

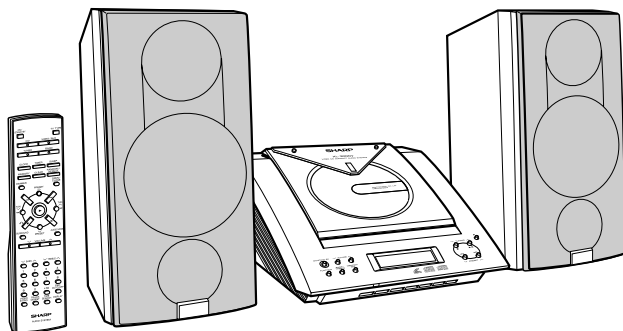
SHARP SERVICE MANUAL

No. S8149XL3000V/

VIDEO CD COMPACT AUDIO SYSTEM

MODEL XL-3000V

XL-3000V Video CD Compact Audio System consisting of XL-3000V (main unit) and CP-XL3000U (speaker system).



• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified should be used.

COMPACT
disc
DIGITAL AUDIO

COMPACT
disc
DIGITAL VIDEO

VIDEO CD

NTSC/PAL

SAVING ENERGY
STAND-BY POWER
CONSUMPTION 0.8W

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SAFETY PRECAUTION FOR SERVICE MANUAL

This product is classified as a CLASS 1 LASER PRODUCT.

Precaution to be taken when replacing and servicing the Laser Pickup.

The AEL (Accessible Emission Level) of Laser Power Output is less than Class 1 but the laser component is capable of emitting radiation exceeding the limit for Class1. Therefore it is important that the following precautions must be observed during servicing to protect your eyes against exposure to the Laser beam.

- (1) When the cabinet has been removed, the power is turned on without a compact disc, and the Pickup is on a position outer than the lead-in position, the Laser will light for several seconds to detect a disc. Do not look into the Pickup Lens.
- (2) The Laser Power Output of the Pickup inside the unit and replacement service parts have already been adjusted prior to shipping.
- (3) No adjustment to the Laser Power should be attempted when replacing or servicing the Pickup.
- (4) Under no circumstances look directly into the Pickup Lens at any time.
- (5) CAUTION - Use of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

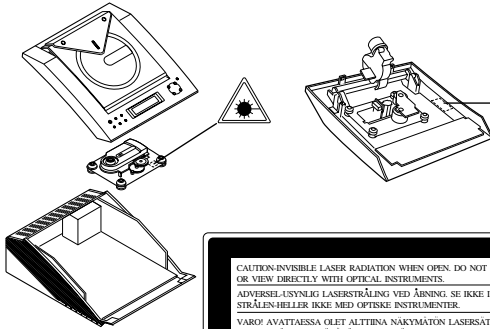
CAUTION

CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1
PRODUCTO LASER DE CLASE 1

- This Video CD Compact Audio System is classified as a CLASS 1 LASER product.
- The CLASS 1 LASER PRODUCT label is located on the rear cover.
- Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

As the laser beam used in this compact disc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

Laser Diode Properties
Material: GaAlAs
Wavelength: 780 nm
Emission Duration: continuous
Laser Output: max. 0.6 mW

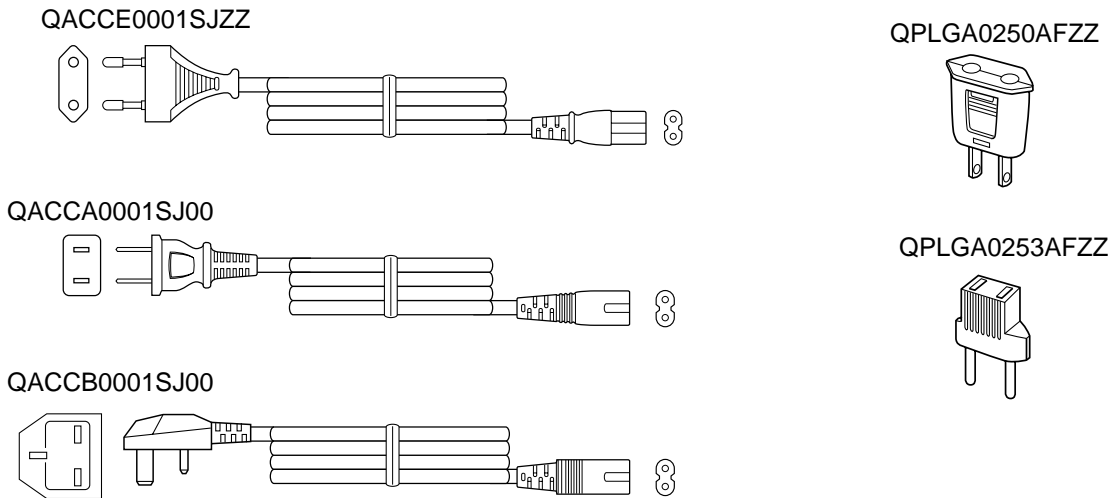


CAUTION-INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.
ADVARSEL-USYNLIG LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN HELLER IKKE MED OPTISKE INSTRUMENTER.
VARO! AVATTAESSA OLET ALLTIDINA NÄRYMÄTÖN LASERSÄTELYLLE. ÄLÄ TUIJOTA SÄTEESEEN ALAKÄÄ KATSO SITA OPTISEN LAITTEEN LÄPI.
VARNING-OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ IN I STRÅLEN OCH BETRÄKTA EJ STRÅLEN GENOM OPTISKT INSTRUMENT.

VOLTAGE SELECTION

Before operating the unit on mains, check the preset voltage. If the voltage is different from your local voltage, adjust the voltage as follows, Turn the selector with a screwdriver unit the appropriate voltage number appears in the window (110 V, 127 V, 220 V or 230 V - 240 V AC).

AC POWER CORD AND PLUG ADAPTOR



FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

■ General

Power source	AC 110/127/220/230 - 240 V, 50/60 Hz
Power consumption	56 W
Dimensions	Width: 230 mm (9-1/16") Height: 128 mm (5-1/16") Depth: 293 mm (11-9/16")
Weight	3.3 kg (7.3 lbs.)

■ Amplifier

Output power	MPO: 60 W (30 W + 30 W) (10 % T.H.D.) RMS: 40 W (20 W + 20 W) (10 % T.H.D.)
Output terminals	Speakers: 6 ohms Headphones: 16 - 50 ohms (recommended: 32 ohms) CD digital output (optical) Video out: 1 Vp-p (75 ohms)
Input terminals	Video/Auxiliary (audio signal): 500 mV/47 kohms

■ Video CD

Video output format	PAL/NTSC
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■ CD player

Type	Compact disc player
Signal readout	Non-contact, 3-beam semiconductor laser pickup
D/A converter	1-bit D/A converter
Frequency response	20 - 20,000 Hz
Dynamic range	90 dB (1 kHz)

■ Tuner

Frequency range	FM: 88 - 108 MHz AM: 531 - 1,602 kHz
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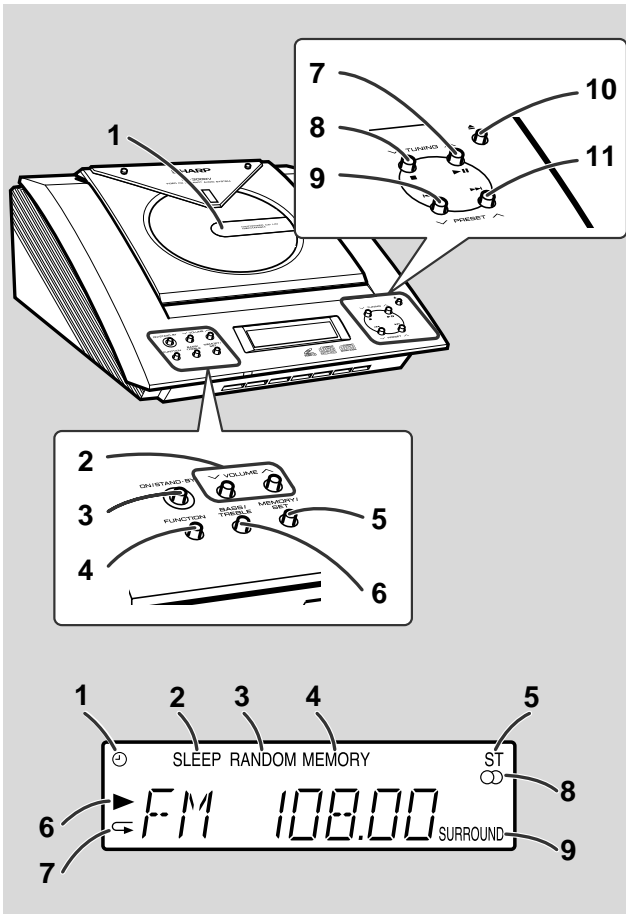
■ Speaker

Type	2-way type speaker system 5 cm (2") Tweeter 10 cm (4") Woofer
Maximum input power	40 W
Rated input power	20 W
Impedance	6 ohms
Dimensions	Width: 140 mm (5-9/16") Height: 288 mm (11-3/8") Depth: 187 mm (7-3/8")
Weight	2.3 kg (5.1 lbs.)/each

Specifications for this model are subject to change without prior notice.

NAMES OF PARTS

■ Front panel

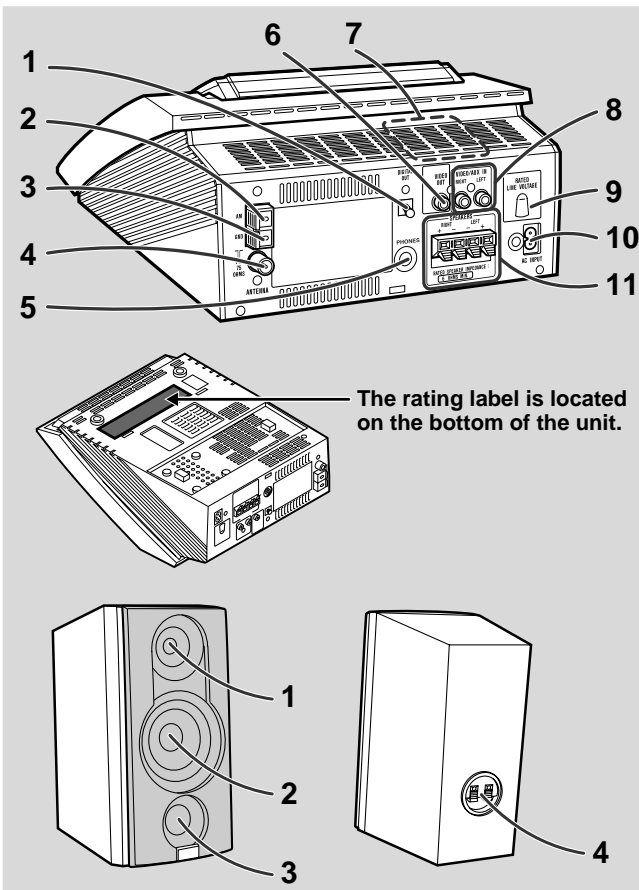


1. Disc Compartment
2. Volume Up and Down Buttons
3. On/Stand-by Button
4. Function Selector Button
5. Memory/Set Button
6. Bass/Treble Selector Button
7. Video CD/CD Play or Pause, Tuning Up Button
8. Video CD Stop or Return, CD Stop, Tuning Down Button
9. Video CD Skip or Previous, CD Track Down, Tuner Preset Down Button
10. Disc Compartment Cover Open/Close Button
11. Video CD Skip or Next, CD Track Up, Tuner Preset Up Button

■ Display

1. Timer Play Indicator
2. Sleep Indicator
3. Video CD/CD Random Play Indicator
4. Memory Indicator
5. FM Stereo Mode Indicator
6. Video CD/CD Play Indicator
7. Video CD/CD Repeat Play Indicator
8. FM Stereo Receiving Indicator
9. Surround Indicator

■ Rear panel

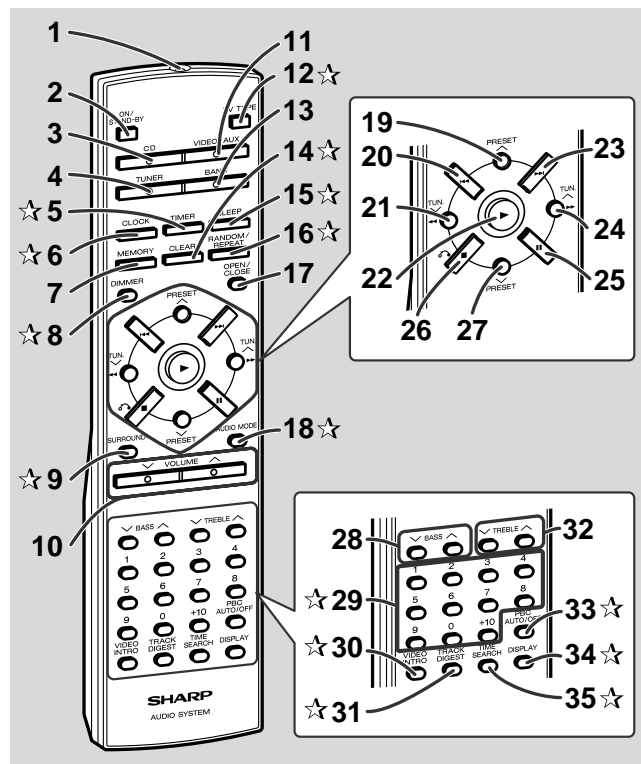


1. CD Digital Output Socket
2. AM Aerial Terminal
3. Aerial Earth Terminal
4. FM 75 Ohms Aerial Socket
5. Headphone Socket
6. Video Output Socket
7. Cooling Fan
8. Video/Auxiliary (Audio Signal) Input Sockets
9. AC Voltage Selector
10. AC Power Input Socket
11. Speaker Terminals

The rating label is located on the bottom of the unit.

■ Speaker system

1. Tweeter
2. Woofer
3. Bass Reflex Duct
4. Speaker Terminals



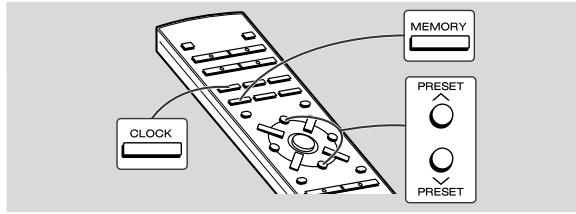
Buttons with "☆" mark in the illustration can be operated on the remote control only. Other buttons can be operated both on the main unit and the remote control.

■ Remote control

- 1. Remote Control Transmitter
- 2. On/Stand-by Button
- 3. Video CD/CD Button
- 4. Tuner Button
- 5. **Timer Button**
- 6. **Clock Button**
- 7. Memory Button
- 8. **Dimmer Button**
- 9. **Surround Button**
- 10. Volume Up and Down Buttons
- 11. Video/Auxiliary Button
- 12. **Video CD TV Type Button**
- 13. Band Selector Button
- 14. **Video CD/CD Clear Button**
- 15. **Sleep Button**
- 16. **Random/Repeat Button**
- 17. Disc Compartment Cover Open/Close Button
- 18. **Audio Mode Button**
- 19. Tuner Preset Up Button
- 20. Video CD Skip or Previous, CD Track Down Button
- 21. Video CD/CD Fast Reverse, Tuning Down Button
- 22. Video CD/CD Play Button
- 23. Video CD Skip or Next, CD Track Up Button
- 24. Video CD/CD Fast Forward, Tuning Up Button
- 25. Video CD/CD Pause Button
- 26. Video CD Stop or Return, CD Stop Button
- 27. Tuner Preset Down Button
- 28. Bass Up and Down Buttons
- 29. **Video CD/CD Direct Search Buttons**
- 30. **Video CD Intro Button**
- 31. **Video CD Track Digest Button**
- 32. Treble Up and Down Buttons
- 33. **Video CD Playback Control Auto/Off Button**
- 34. **Video CD/CD Display Button**
- 35. **Video CD Time Search Button**

OPERATION MANUAL

Setting the Clock



This may be operated only with the remote control.
In this example, the clock is set for the 24-hour (0:00) display.

1 Press the CLOCK button and within 3 seconds, press the MEMORY button.

2 Within 1 minute, press the PRESET (∨ or ∧) button to select 24-hour or 12-hour display and then press the MEMORY button.

"0:00" → The 24-hour display will appear.
(0:00 - 23:59)

"AM 12:00" → The 12-hour display will appear.
(AM 12:00 - PM 11:59)

Note that this can only be set when the unit is first installed or it has been reset.

3 Within 1 minute, press the PRESET (∨ or ∧) button to adjust the hour and then press the MEMORY button.

When the 12-hour display is selected, "AM" will change automatically to "PM".

4 Within 1 minute, press the PRESET (∨ or ∧) button to adjust the minutes and then press the MEMORY button.

- The hour will not advance even if minutes advance from "59" to "00".
- The clock starts from "0" second. (Seconds are not displayed.)

To confirm the time display when the power is on:
Press the CLOCK button.
The time display will appear for about 5 seconds.

Note:
The time will flash at the push of the CLOCK button when the AC power supply is restored after a power failure or unplugging the unit. Readjust the clock as follows.

To readjust the clock:
Perform "Setting the Clock" from the beginning.

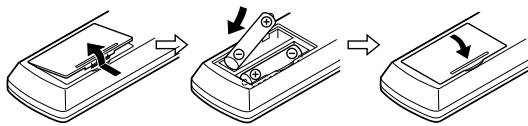
To change the 24-hour or 12-hour display:

- 1 Clear all the programmed contents.
- 2 Perform "Setting the Clock" from the beginning.

Remote Control

Battery installation

- 1 Remove the battery cover.
- 2 Insert the batteries according to the direction indicated in the battery compartment.
When inserting or removing the batteries, push them towards the ⊖ battery terminals.
- 3 Replace the cover.



Precautions for battery use:

- Replace all old batteries with new ones at the same time.
- Do not mix old and new batteries.
- Remove the batteries if the unit will not be used for long periods of time. This will prevent potential damage due to battery leakage.

Caution:

- Do not use rechargeable batteries (nickel-cadmium battery, etc.).
- Installing the batteries incorrectly may cause the unit to malfunction.

Notes concerning use:

- Replace the batteries if the operating distance is reduced or if the operation becomes erratic. Purchase 2 "AAA" size batteries (UM-4, R03, HP-16 or similar).
- Periodically clean the transmitter on the remote control and the sensor on the unit with a soft cloth.
- Exposing the sensor on the unit to strong light may interfere with operation. Change the lighting or the direction of the unit.
- Keep the remote control away from moisture, heat, shock, and vibrations.

Troubleshooting

If trouble occurs

When this product is subjected to strong external interference (mechanical shock, excessive static electricity, abnormal supply voltage due to lightning, etc.) or if it is operated incorrectly, it may malfunction.

If such a problem occurs, do the following:

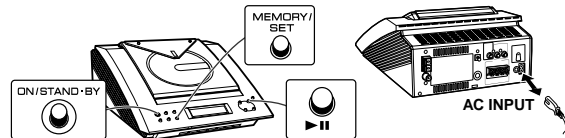
- 1 Set the unit to the stand-by mode and turn the power on again.
- 2 If the unit is not restored in the previous operation, unplug and plug in the unit, and then turn the power on.

Note:

If neither operation above restores the unit, clear all the memory by resetting it.

Clearing all the memory (reset)

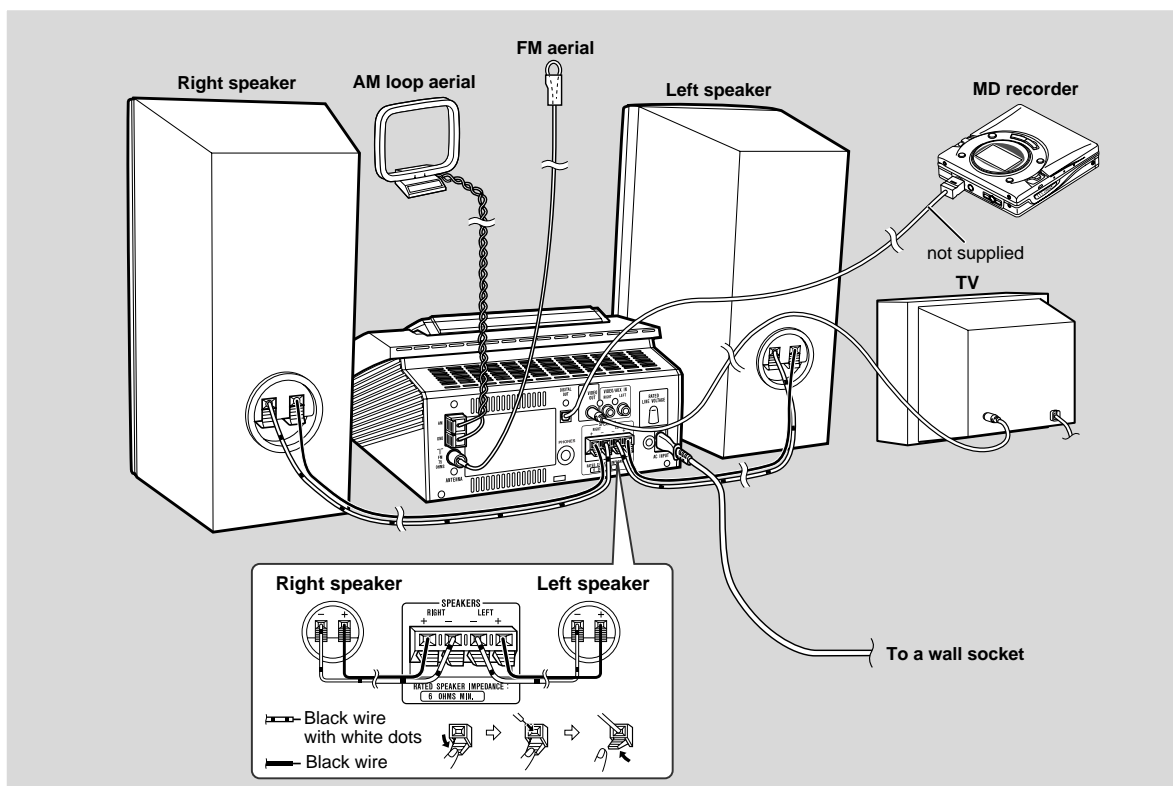
- 1 Press the ON/STAND-BY button to enter the power stand-by mode.
- 2 Unplug the AC power lead from the AC INPUT socket on the unit.
- 3 Whilst pressing down the MEMORY/SET button and the ►► button, plug the AC power lead into the AC INPUT socket on the unit.



Caution:

- This operation will erase all data stored in memory including clock, timer settings, tuner preset, and CD programme.
- After the above operation, interval span setting for AM will be returned to 9 kHz (50 kHz for FM) automatically.

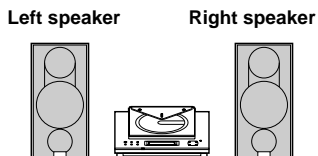
System Connections



System Connections (continued)

■ Placing the speaker system

There is no distinction between the right and the left speakers.



Speaker grilles are removable:
Make sure nothing comes into contact with the speaker diaphragms when you remove the speaker grilles.

Notes:

- The speakers are magnetically shielded. Therefore, they do not affect the display even you use them near the TV. However, some colour variation may occur, depending on the type of TV used.

If colour variation occurs...

Turn off the TV (from the power switch).
After 15 - 30 minutes, turn the TV on again.

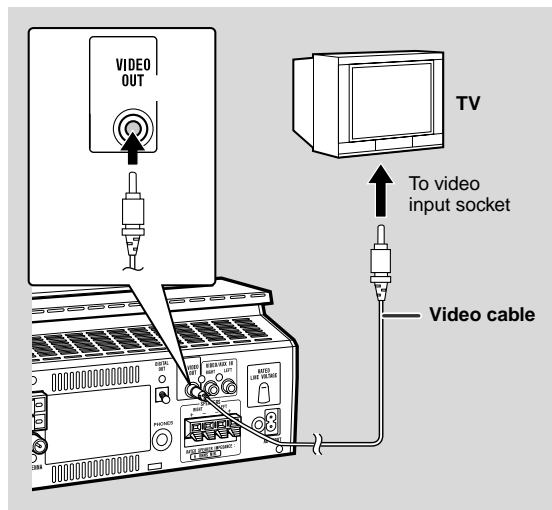
If the colour variation is still present...

Move the speakers further away from the TV.

- If any kind of magnet or an electromagnet is placed too close to the TV and the system, irregular colours may appear on the TV screen.

■ TV/monitor connection

If the TV/monitor has a video input, connect it to VIDEO OUT socket on the rear of the unit.



Note:

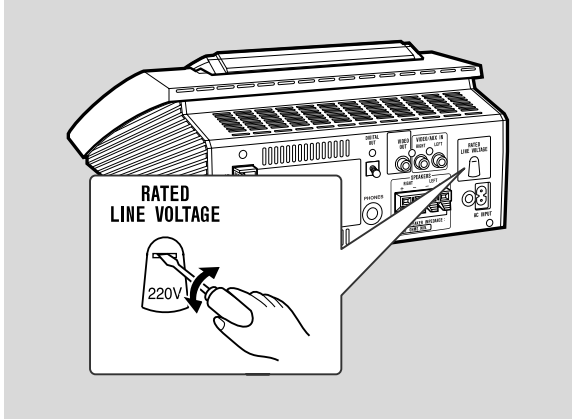
If the TV/monitor does not have a video input, the VIDEO OUT socket on the unit should be connected to a VCR with a video input, which in turn should be connected to the TV/monitor through the TV ANTENNA/CABLE input. (Be sure to turn on the VCR, and set the VCR's input mode to "auxiliary".)

System Connections (continued)

■ Setting the AC voltage selector

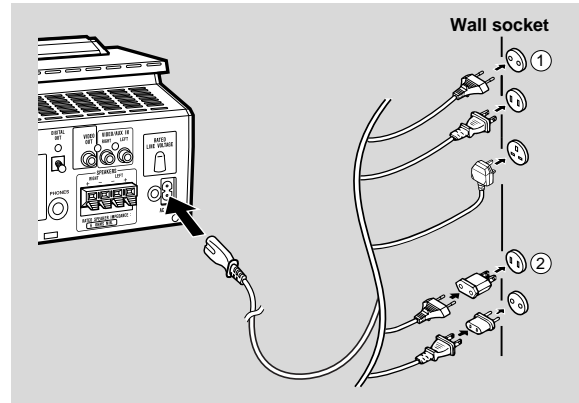
Check the setting of the AC voltage selector located on the rear panel before plugging the unit into a wall socket. If necessary, adjust the selector to correspond to the AC power voltage used in your area.

Turn the selector with a screwdriver until the appropriate voltage number appears in the window (110 V, 127 V, 220 V or 230 V - 240 V AC).



■ Connecting the AC power lead

After checking all the connections have been made correctly, connect the AC power lead to the AC power input socket, then into the wall socket.



Notes:

- Unplug the AC power lead from the wall socket if the unit will not be in use for a prolonged period of time.
- **Never use a power lead other than the one supplied. Use of a power lead other than the one supplied may cause an electric shock or fire.**

AC Plug Adaptor

In areas (or countries) where a wall socket as shown in illustration ② is used, connect the unit using the AC plug adaptor supplied with the unit, as illustrated. The AC plug adaptor is not included in areas where the wall socket and AC power plug can be directly connected (see illustration ①).

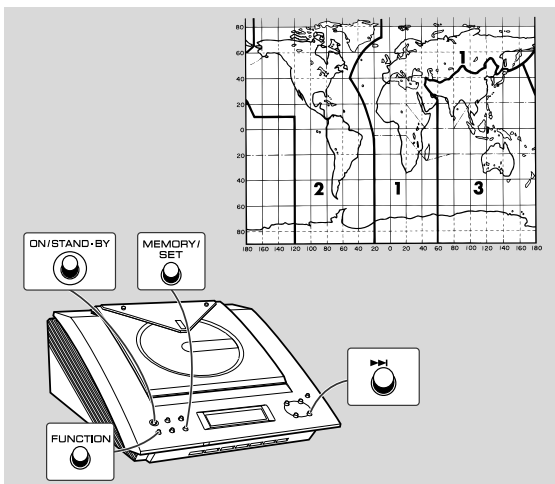
System Connections (continued)

■ Setting the AM/FM interval

The International Telecommunication Union (ITU) has established that member countries should maintain either a 10 kHz or 9 kHz interval between broadcasting frequencies of AM stations and 100 kHz or 50 kHz for FM stations. The illustration shows the 50/9 kHz zones (regions 1 and 3), and the 100/10 kHz zone (region 2).

This product is not equipped with a span selector. However, it will be adjusted to a 9 kHz AM (50 kHz FM) interval when shipped from the factory.

Before using the unit, be sure to set it to the AM/FM tuning interval (span) used in your area.

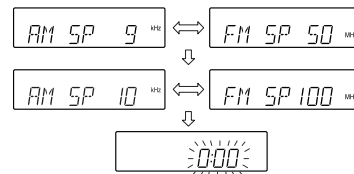


To check the tuning span currently selected:

- 1 Press the ON/STAND-BY button to turn the power on.
- 2 Press the FUNCTION button until "AM" appears on the display.
 - If "AM 531 kHz" is displayed, it means that AM stations have been adjusted for a 9 kHz span and FM stations for 50 kHz span. If "AM 530 kHz" is displayed, AM stations have been adjusted for a 10 kHz span and FM stations for 100 kHz span.

To change from a 9 kHz AM (50 kHz FM) interval to a 10 kHz AM (100 kHz FM) interval:

- 1 Press the ON/STAND-BY button to enter the stand-by mode.
- 2 Hold down the ►► button and the MEMORY/SET button for at least 4 seconds. Release the buttons when "AM SP 10 kHz" and "FM SP 100 kHz" are displayed alternately.
 - The clock display will reappear.



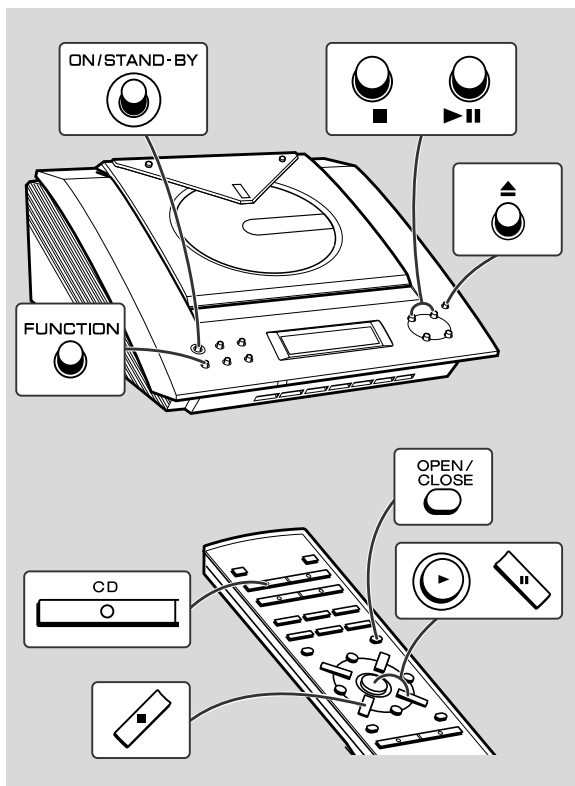
To return to a 9 kHz AM (50 kHz FM) interval:

- 1 Press the ON/STAND-BY button to enter the stand-by mode.
- 2 Hold down the ►► button and the MEMORY/SET button for at least 4 seconds. Release the buttons when "AM SP 9 kHz" and "FM SP 50 kHz" are displayed alternately.
 - The clock display will reappear.

Caution:

- When the unit is left for a few hours after the span has been switched and the AC power lead disconnected, the AM span will be automatically returned to 9 kHz (FM span to 50 kHz). If this happens, set the span again.
- When the span is switched, all the memorised stations will be cancelled.

Listening to a CD



- 1 Press the ON/STAND-BY button to turn the power on.**
- 2 Press the FUNCTION button until "CD" or "NO DISC" appears on the display.**
When operating with the remote control, press the CD button.
- 3 Press the ▲ (OPEN/CLOSE) button to open the disc compartment.**
- 4 Place a CD on the spindle, label side up.**
Be sure to place 8 cm (3") disc in the middle of a disc holder.
- 5 Press the ▲ (OPEN/CLOSE) button to close the disc compartment.**

16	47:38
Total number of tracks	Total playing time
- 6 Press the ► (▶) button to start playback from track 1.**
When the last track on the disc has finished playing, the unit will stop automatically.

To interrupt playback:

Main unit operation:

Press the ► (▶) button.

To resume playback from the same point, press the ► (▶) button again.

Remote control operation:

Press the ► (▶) button.

To resume playback from the same point, press the ► (▶) button.

To stop playback:

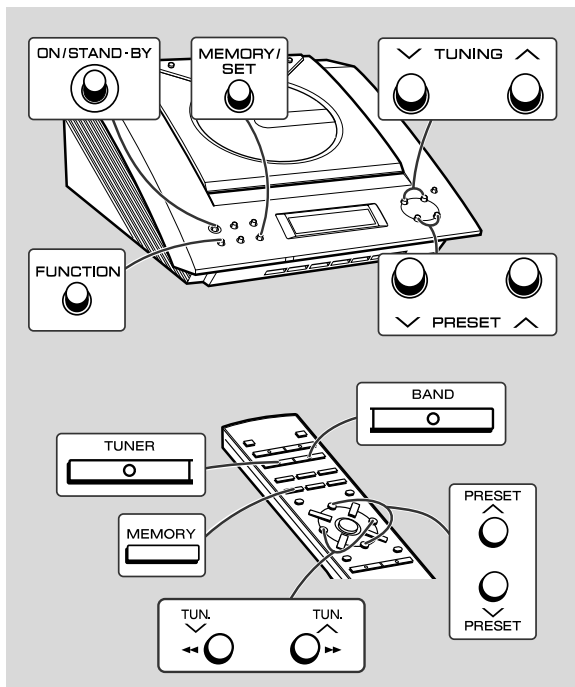
Press the ■ button.

To remove the CD:

Whilst in the stop mode, press the ▲ (OPEN/CLOSE) button.

Press the disc eject button and remove the CD.

Listening to the Radio



- 1 Press the ON/STAND-BY button to turn the power on.**
- 2 Press the FUNCTION button until "FM" or "AM" appears on the display.**
When operating with the remote control, press the TUNER button, and then the BAND button to select "FM" or "AM".
- 3 Press the TUNING (∨ or ∧) button to tune in to the desired station.**

Manual tuning:
Press the TUNING button as many times as required to tune in to the desired station.

Auto tuning:
When the TUNING button is pressed for more than 0.5 seconds, scanning will start automatically and the tuner will stop at the first receivable broadcast station.

Notes:

 - This can be operated by pressing the TUN. (∨ or ∧) button on the remote control.
 - When radio interference occurs, auto scan tuning may stop automatically at that point.
 - Auto scan tuning will skip weak signal stations.
 - To stop the auto tuning, press the TUNING button again.

To receive an FM stereo transmission:

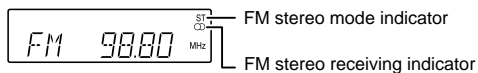
Press the FUNCTION (BAND) button to display the "ST" indicator.

● "∞" will appear when an FM broadcast is in stereo.

● If the FM reception is weak, press the FUNCTION (BAND) button to extinguish the "ST" indicator. The reception changes to monaural, and the sound becomes clearer.

After use:

Press the ON/STAND-BY button to enter the power stand-by mode.



DISASSEMBLY

Caution on Disassembly

Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep it safe and ensure excellent performance:

1. Take compact disc out of the unit.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need to be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

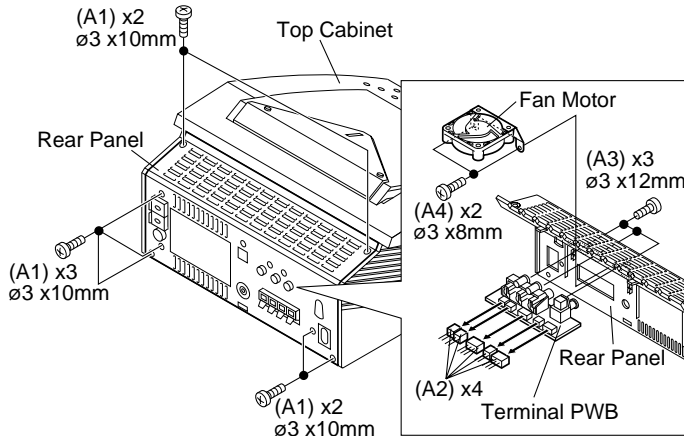


Figure 10-1

STEP	REMOVAL	PROCEDURE	FIGURE
1	Rear Panel/ Terminal PWB/ Fan Motor	1. Screw (A1) x7 2. Socket (A2) x4 3. Screw (A3) x4 4. Screw (A4) x2	10-1 10-1,2 10-1
2	Top Cabinet/ Video PWB	1. Screw (B1) x2 2. Hook (B2) x5 3. Flat Cable (B3) x2 4. Socket (B4) x9 5. Screw (B5) x3 6. Socket (B6) x1	10-2 11-1 10-2
3	Tuner PWB	1. Screw (C1) x2 2. Socket (C2) x1	11-1
4	Power PWB	1. Socket (D1) x2 2. Hook (D2) x1	11-1
5	Main PWB	1. Socket (E1) x1 2. Screw (E2) x8	11-1
6	Display PWB	1. Screw (F1) x4 2. Hook (F2) x4	11-2
7	CD Mechanism	1. Screw (G1) x4	11-2
8	Gear Box	1. Screw (H1) x1 2. Holder (H2) x1 3. Lever (H3) x1 4. Screw (H4) x3 5. Lever (H5) x1	11-2
9	LED PWB	1. Screw (J1) x1	11-2

Note:

After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of connector remove to protect the optical pickup from electrostatic damage.

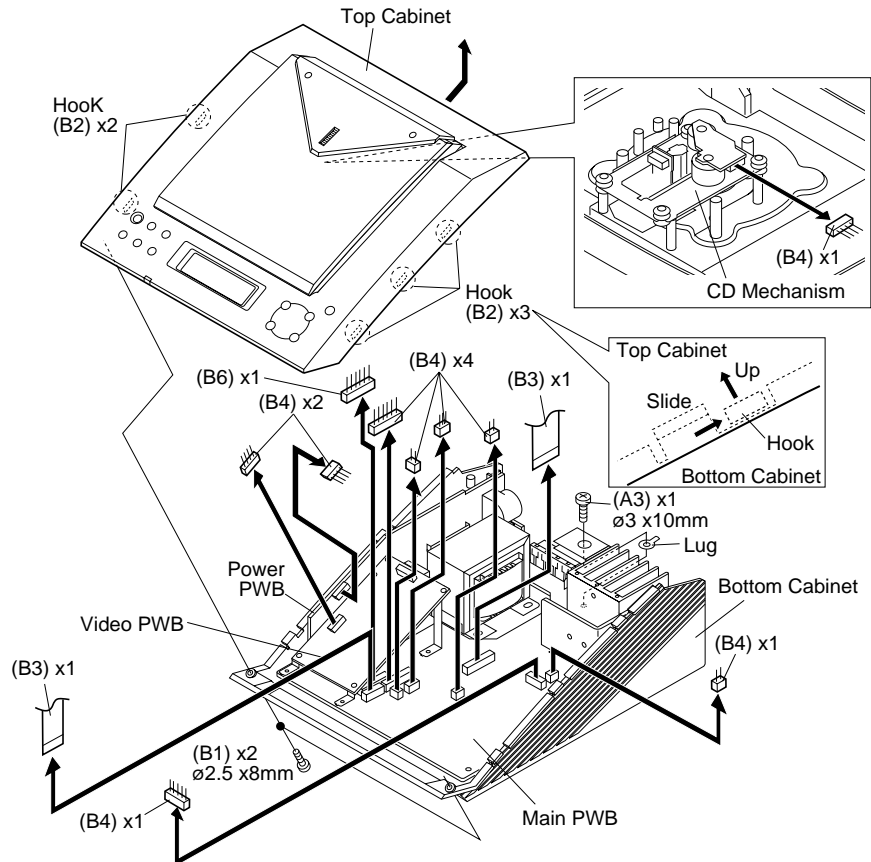


Figure 10-2

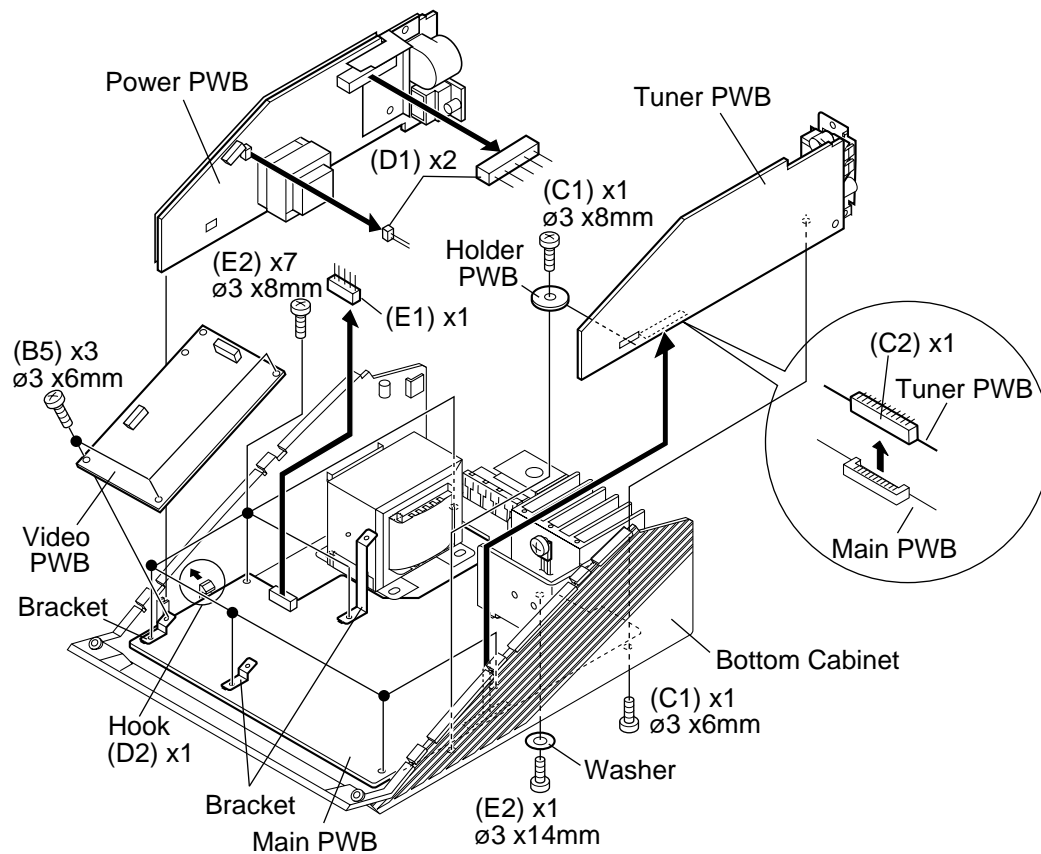


Figure 11-1

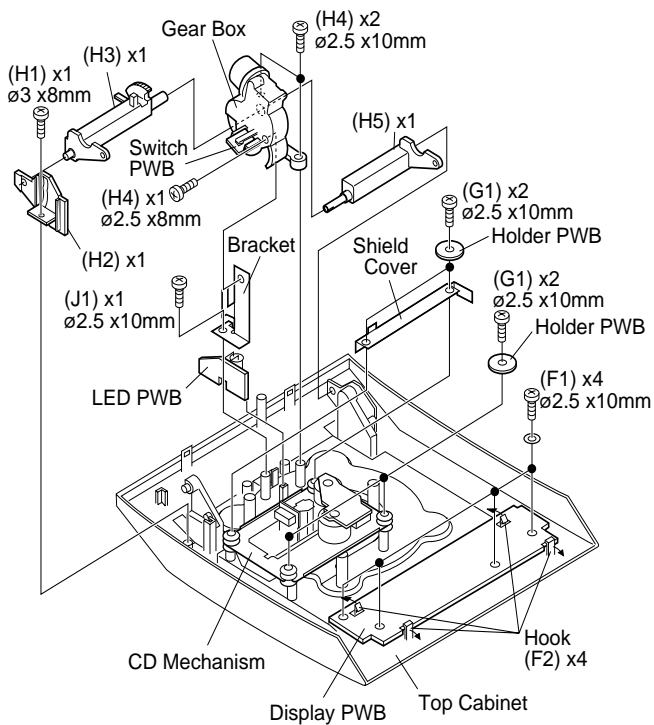


Figure 11-2

STEP	REMOVAL	PROCEDURE	FIGURE
1	Speaker	1. Net Frame (A1) x1 2. Front Panel (A2) x1 3. Screw (A3) x6	11-3

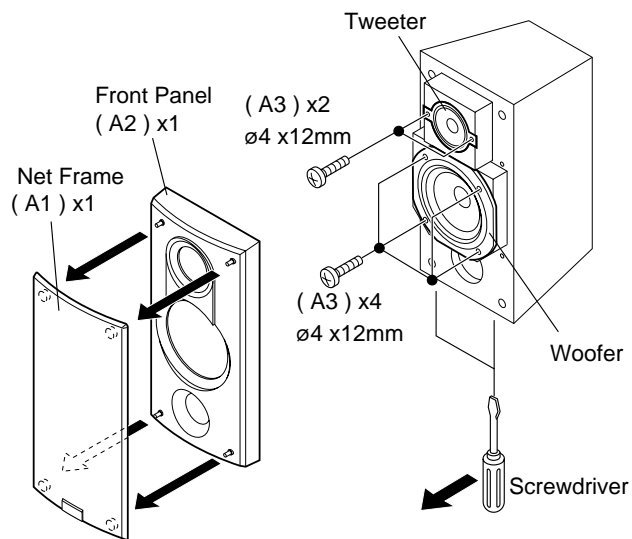


Figure 11-3

REMOVING AND REINSTALLING THE MAIN PARTS

How to remove the CD lid (See Fig. 12-1.)

Perform steps 1,2 and 8 of the disassembly method to remove the gear box. (See page 10,11)

1. Remove the switch PWB.
2. Remove the screws (A1) x 4 pcs., to remove the gear box lid.
3. Remove the gears (A2) x 1 pc. and (A3) x 1 pc.
4. Remove the screws (A4) x 2 pcs., to remove the motor.

Caution:

Be careful so that the gear is not damaged.
(The damage gear emits noise during searching.)

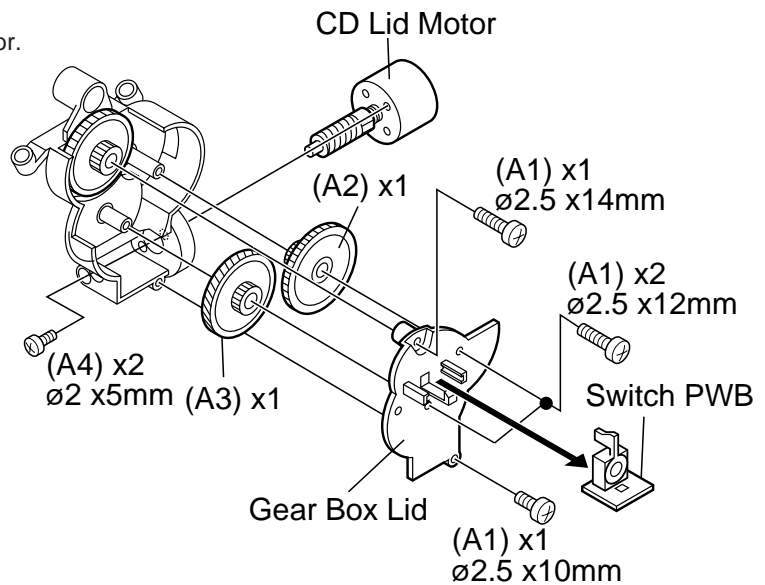


Figure 12-1

CD MECHANISM SECTION (See Fig. 12-2.)

Perform steps 1,2 and 7 of the disassembly method to remove the CD mechanism. (See page 10,11)

1. Remove the mechanism cover, paying attention to the pawls (A1) x 4 pcs.
2. Remove the screws (A2) x 2 pcs., to remove the shaft (A3) x 1 pc.
3. Remove the stop washer (A4) x 1 pc., to remove the gear (A5) x 1 pc.
4. Remove the pickup.

Note:

After removing the connector for the optical pickup from the connector, wrap the conductive aluminium foil around the front end of connector remove to protect the optical pickup from electrostatic damage.

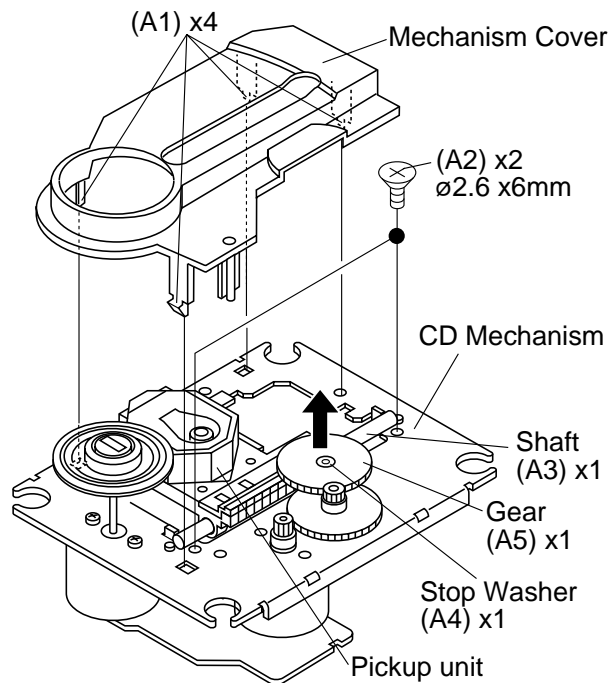


Figure 12-2

ADJUSTMENT

TUNER SECTION

fL: Low-range frequency
fH: High-range frequency

• AM IF/RF

Signal generator: 400 Hz, 30%, AM modulated

Frequency	Frequency	Display	Setting/ Adjusting Parts	Instrument Connection
AM IF	450 kHz	1,602 kHz	T351	*1
AM Band Coverage	—	531 kHz	(fL): T306 1.1 ± 0.1 V	*2
AM Tracking	990 kHz	990 kHz	(fL): T302	*1

*1. Input: Antenna, Output: Speaker Terminal
*2. Input: Input is not connected, Output: TP301

• FM Detection

Signal generator: 10.7 MHz, FM sweep generator

Test Stage	Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection
FM IF	10.7 MHz	98.0 MHz	T304(Turn the core of T304 fully counter-clockwise.)	Input: Pin 1 of IC301

• FM RF

Signal generator: 1 kHz, 75 kHz dev., FM modulated

Frequency	Frequency Display	Setting/ Adjusting Parts	Instrument Connection	
FM Band Coverage	—	87.50 MHz	(fL): L303 3.4 ± 0.1 V	*1
FM RF	98.00 MHz (10~30 db)	98.00 MHz	L302	*2

*1. Input: Antenna, Output: TP301
*2. Input: Antenna, Output: Speaker Terminal

• FM Mute Level

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Frequency	Display	Adjusting Parts	Instrument Connection
98.00 MHz (25±1 dBμV)	98.00 MHz	VR351*1	Input: SO301 Output: Speaker Terminal

*1. Adjust so that an output signal appears.

• Check FM VT

Signal generator: 1 kHz, 40 kHz dev., FM modulated

Frequency	Display	Check Point	Instrument Connection
87.5 MHz	87.5 MHz	3.4 V ± 0.1 V	TP301
108 MHz	108 MHz	7.8 V ± 1.0 V	TP301

• Setting the Test Mode

Keeping the FF/PRESET UP button and MEMORY/SET button pressed, turn on ON/STAND-BY. Then, the frequency is initially set in the memory as shown in Table. Call it with the VOLUME UP/DOWN button to use it for adjustment and check of tuner circuit.

Preset No.	FM	Preset No.	AM
1	87.50 MHz	6	531 kHz
2	108.00 MHz	7	1,602 kHz
3	98.00 MHz	8	990 kHz
4	90.20 MHz	9	612 kHz
5	106.00 MHz	10	1,404 kHz

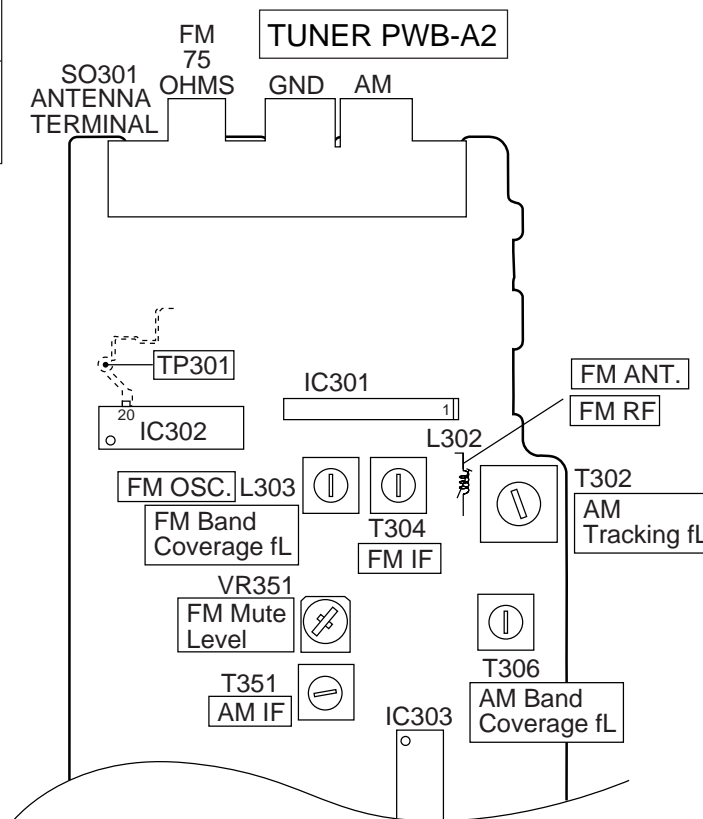


Figure 13-1 ADJUSTMENT POINTS

XL-3000V

CD SECTION

Since this CD system incorporates the following automatic adjustment function, when the pickup is replaced, it is not necessary to readjust it.

VIDEO CD SECTION

A-BEX
TEST VIDEO CD] Model No. TVD-581
TVD-581A

• Measurement of oscillation frequency

Disc	Adjusting Point	Instrument Connection	Specified Value
CD Stop	TC100V	27.00000 MHz ± 160 Hz	① of R163V and ② of C183V

• Checking of video output signal

Checking of color bar

Disc	Adjusting Point	Instrument Connection
Track 2	Video output terminal	Chroma Peak Level 100 ± 15 IRE

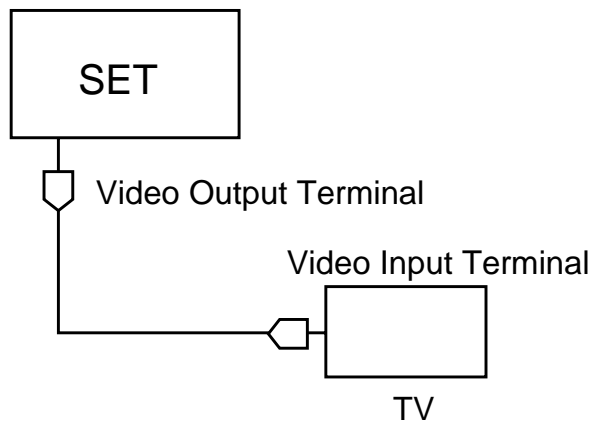


Figure 14-3 Checking of video output signal

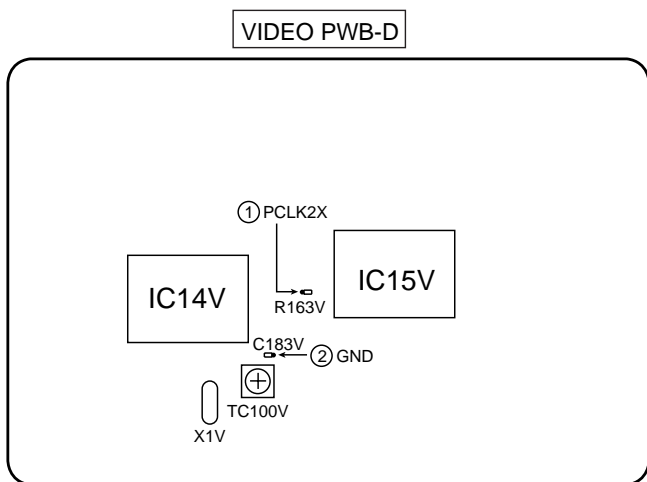


Figure 14-1 ADJUSTMENT POINTS

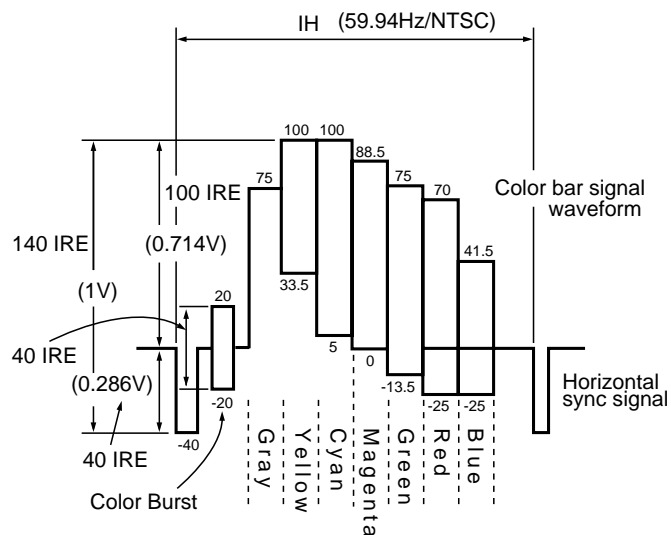


Figure 14-4

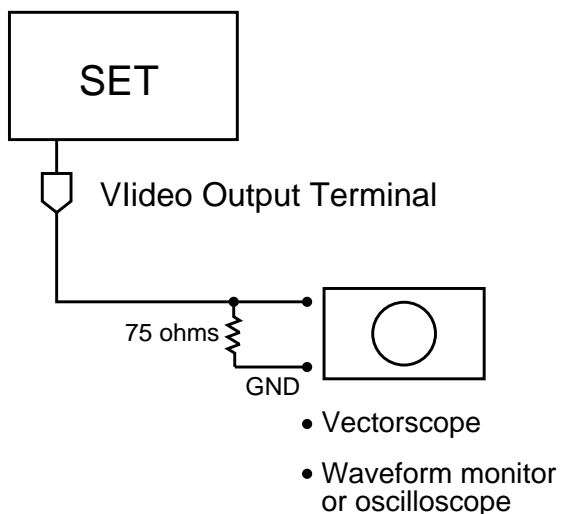
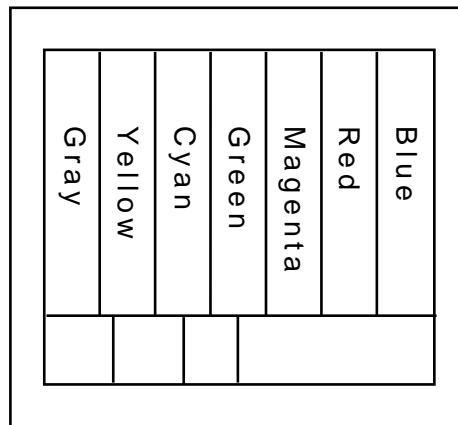


Figure 14-2 Measurement of oscillation frequency




TV monitor

Figure 14-5

Checking of vector scope waveform

Disc	Checking	Setting	Checking Item
Track 2	VIDEO OUT	Set the phase of color burst signal (B) to 180°-360° line.	Phase check $\pm 10^\circ$

( Check that the setting is within the illustrated range.)

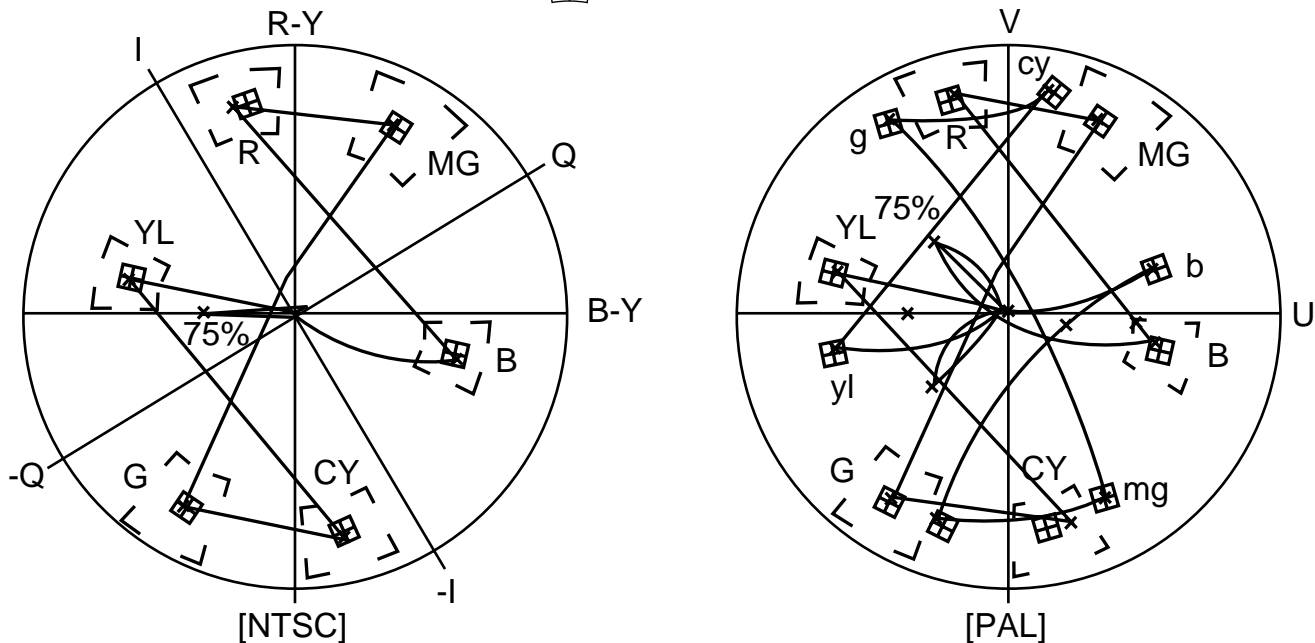


Figure 15-1

Checking the black-and-white level

Disc	Checking	Checking Item
Track 16	VIDEO OUT	Output level 100 ± 10 IRE

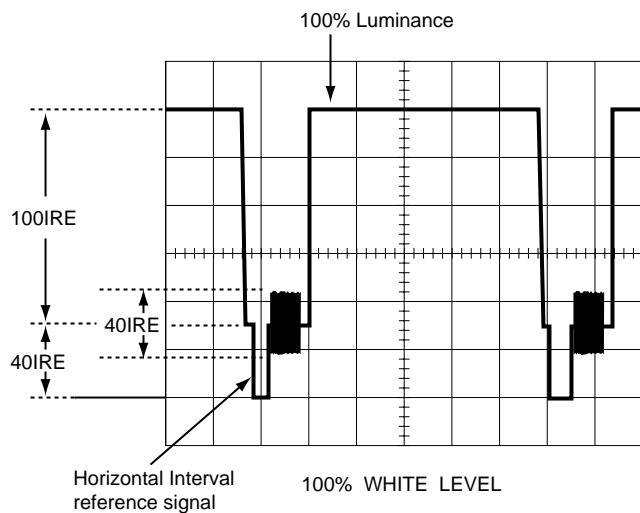


Figure 15-2

TEST MODE

The test mode applied to this microcomputer has three modes, namely the ordinary test mode for adjustment or measurement, the aging test mode, and the self-diagnosis test mode for self-judgment in case of final product inspection.

1. Turning on the test mode

For obtaining each test mode, press the ON/STAND-BY button, while keeping pressing the following two buttons in the ordinary stand-by mode (power off). In this case, the main unit buttons are valid. When turning the ON/STAND-BY on with remote control buttons, test modes are not obtained.

[Ordinary test mode]

1. Tuner Test Mode (TEST 2)
.....REW/PRESET DOWN + CD PLAY
2. Electronic Volume Test Mode (TEST 3)
.....REW/PRESET DOWN + FF/PRESET UP
3. Timer Test Mode (TEST 4)
.....FUNCTION + VOLUME UP
4. LCD Test Mode (TEST 5)
.....FUNCTION + FF/PRESET UP
5. Electric CD Lid Aging Test Mode (TEST 8)
.....FUNCTION + CD PLAY

[Self-diagnosis Test Mode]

1. Button input diagnosis test mode (TEST6)
.....FUNCTION + VOLUME
Processes are different depending on destinations at initial settings.

2. Tuner Test Mode (TEST 2)

1. Outline of tuner (radio) test mode

The tuner test mode is intended to store the adjustment and measurement frequencies in the preset memory CH. When adjusting the tuner section in the production line, adjusting personnel are not required to set frequency.

2. Details of tuner test mode

Press the "REW/PRESET DOWN" and "CD PLAY" buttons in POWER OFF state and turn on the power by the use of "ON/STAND-BY" button to preset and store frequency for adjustment and measurement of destination specified by the AREA terminal in the preset memory CH. However, Ordinary 1 and Ordinary 2 are stored in the destinations (selected by SPAN switching operation) when the test mode is obtained.

("FF▶" + "MEMORY/SET" KEY SPAN CHANGE)

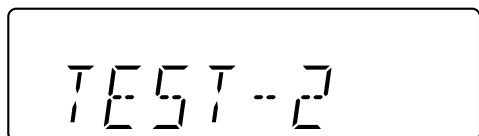
(As for frequencies to be preset and stored for each destination, refer to item 3.)

The tuner test mode is started from preset No.1.

The operations of test mode are identical with the ordinary operations of TUNER function. FUNCTION switching is invalid.

It is necessary to discard the content of preset memory when the tuner test mode is ended; be sure to write "0000" or "1111" bits in the memory to be checked for judging memory error at initial setting and to initialize memory.

When the tuner test mode is obtained, the following display lights for one second.



- The TUNER TEST2 mode is obtained with



+ MEMORY + ON/STAND-BY.



Turn off AC in the TEST2 mode to restore the initial state.



Turn off POWER to protect the memory of TEST2 mode. Turn off POWER again to obtain the ordinary operation while the data is stored in the memory (besides TUNER).



If AC OFF state is maintained in this state for about 1/2 day, start is executed in the initial state.

- To clear the whole memory, insert the AC cord, pressing MEMORY + CD PLAY.

3. Preset frequencies for various destinations (random preset memory)

CH	BAND	FM
1		FM 87.50 MHz
2		FM108.00 MHz
3	FM	FM 98.00 MHz
4	STEREO	FM 90.20 MHz
5		FM106.00 MHz

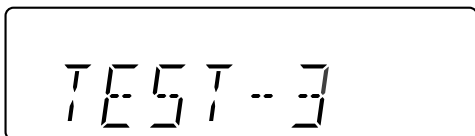
CH	BAND	AM
6		AM 531 kHz
7		AM1602 kHz
8	AM	AM 990 kHz
9		AM 612 kHz
10		AM1404 kHz

CH	BAND	FM
16-25		/
26		FM106.00 MHz
27		FM 90.20 MHz
28	FM	FM 98.00 MHz
29	MONO	FM108.00 MHz
30		FM 87.50 MHz

- The slant line sections of the table store no memory.

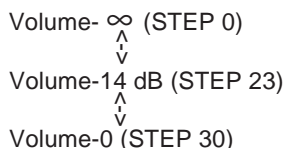
3. Electronic volume Test Mode (TEST 3)

When this test mode is obtained, the following display lights for one second.



In this mode, volume is -14 dB (STEP28), BASS/TREBLE is set to 0 (0 dB) and SURROUND mode to OFF, and start-up function to CD, respectively. The button operations in the test mode are the same as those of ordinary operation except volume UP/DOWN.

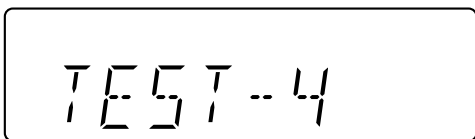
- (1) The display is the same as that of ordinary operation except test mode setting.
- (2) Unlike the ordinary state, the volume is controlled with the volume UP/DOWN button in accordance with the following three steps.



- (3) BASS/TREBLE and SURROUND are switched when button is pressed.

4. Timer test Mode (TEST 4)

When this test mode is obtained, the following display lights for one second.

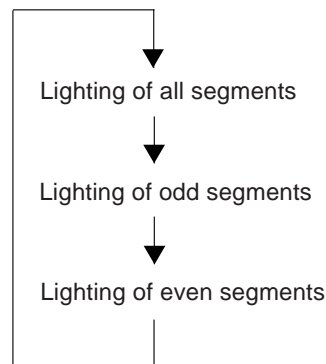


Set the current time and timer time according to the following procedure to reproduce the timer.

- 1. Set the current time to 1:00, the timer to ON time 1:05, the function to CD, and volume to STEP 12, respectively. One minute is counted as one second, and the timer is reproduced. The fade-in (when playback is started) is executed at a rate of one step for 1 sec. After completion of fade-in, the fade-out is executed at a rate of one step for 1 sec (WAIT 1 sec inserted). After completion of fade-out, the power is turned off (after WAIT 1 sec), and the mode is shifted to the standby. The display during operation is the same as that of ordinary timer operation.

5. LCD Test Mode (TEST 5)

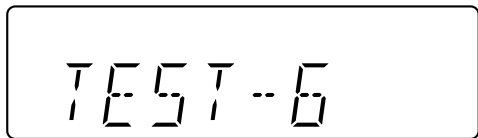
When the LCD test mode is obtained, all the LCD segments are lighted. Then pressing the "PLAY" button switches display as below.



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6. Key input diagnosis Test Mode (TEST 6)

When the test mode is obtained, the following is displayed.



This test mode is intended to check whether all the main unit buttons can be detected. Accordingly, in this test mode, it is checked whether the "ON/STAND-BY" button was pressed after all the buttons shown below were pressed. If the result is OK, OK is displayed. If any one of keys was not pressed, an error is displayed. In both cases of OK termination or error termination, the mode is shifted to the standby mode if the "ON/STAND-BY" button is pressed subsequently.

All models using this type of microcomputer are not always provided with the same buttons. Since the buttons used are different depending on models, types of buttons to be used are determined by whether RDS, SURROUND, and an electric lid are available at the initial setting by MODEL port.

The order of buttons to be pressed is not determined. Accordingly, it is checked whether all buttons have been pressed.

- 1. PU-IN buttons: REW/PRESET DOWN + CD STOP
Since this model is provided with SURROUND (HAVE OR NOT), RDS (HAVE OR NOT), and electric CD lid, the following 10 buttons are detected as all buttons.
PLAY, BASS/TREBLE, FUNCTION, VOLUME UP/DOWN, MEMORY/SET, REW, FF, STOP, CD-OPEN/CLOSE

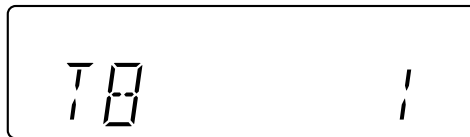
The OK/NG display of test result is as follows.



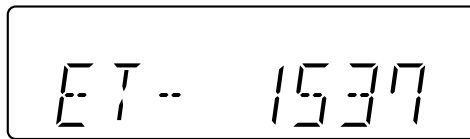
7. Electric CD lid Aging Test Mode (TEST 8) (Only for model with electric CD lid)

Outline
OPEN/CLOSE operations of electric CD lid are repeated. The number of repeated times and time period are monitored. If the lid does not move to the regular position after the specified time, operation is stopped. When an error is detected by [CLID_PRO] during CLOSE, operation is also stopped.

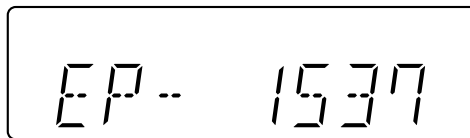
- a. POWER ON for function AUX
CD lid position is checked.
CLOSE position: Operation proceeds to the next process.
Position other than CLOSE: After the lid moves to CLOSE, operation proceeds to the next process.
- b. CD lid operation started
OPEN operation
WAIT 1 second
CLOSE operation
WAIT 1 second
- c. Operations above are repeated.
Specified monitoring time
OPEN operation: 5 seconds
CLOSE operation: 5 seconds
- d. Display
OPEN>CLOSE is counted as 1. 1 to 59999 are counted; if the count is over 59999, display is returned to 0 to repeat counting.



Display when the lid does not move to the regular position after the specified time
(Ex: Defective operation occurring in the middle of 1538.)



Highlight display of stop when an error is detected by [CLID-PRO]
(Ex: Defective operation occurring in the middle of 1538.)



NOTES ON SCHEMATIC DIAGRAM

- Resistor:
To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.
- Capacitor:
To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.
(CH), (TH), (RH), (UJ): Temperature compensation
(ML): Mylar type
(P.P.): Polypropylene type
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
 1. In the tuner section,
() : AM mode
: FM stereo mode
 2. In the CD section, the CD is stopped.
- Parts marked with "△" (□ = = = □) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
NSW801	PICKUP IN	ON—OFF
SW651	VOLTAGE SELECTOR	110V
SW709	ON/STAND-BY	ON—OFF
SW710	CD LID OPEN/CLOSE	ON—OFF
SW711	FF/PRESET UP	ON—OFF
SW712	CD PLAY/PAUSE/TUNING UP	ON—OFF
SW713	VOLUME UP	ON—OFF

REF. NO	DESCRIPTION	POSITION
SW718	VOLUME DOWN	ON—OFF
SW721	MEMORY/SET	ON—OFF
SW722	BASS/TREBLE	ON—OFF
SW725	CD STOP/TUNING DOWN	ON—OFF
SW726	REW/PRESET DOWN	ON—OFF
SW727	FUNCTION	ON—OFF
SW802	CD LID	ON—OFF

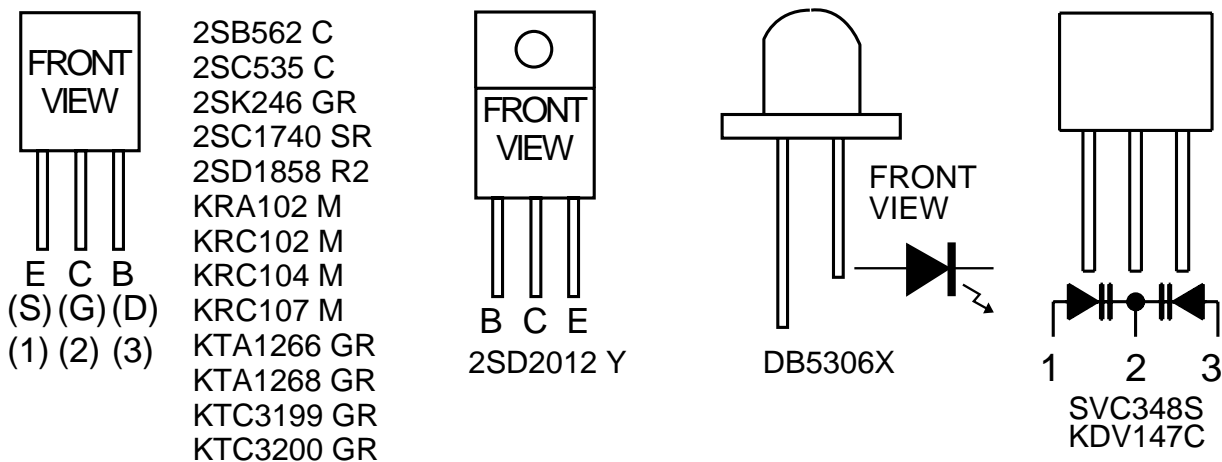


Figure 19 TYPES OF TRANSISTOR AND LED

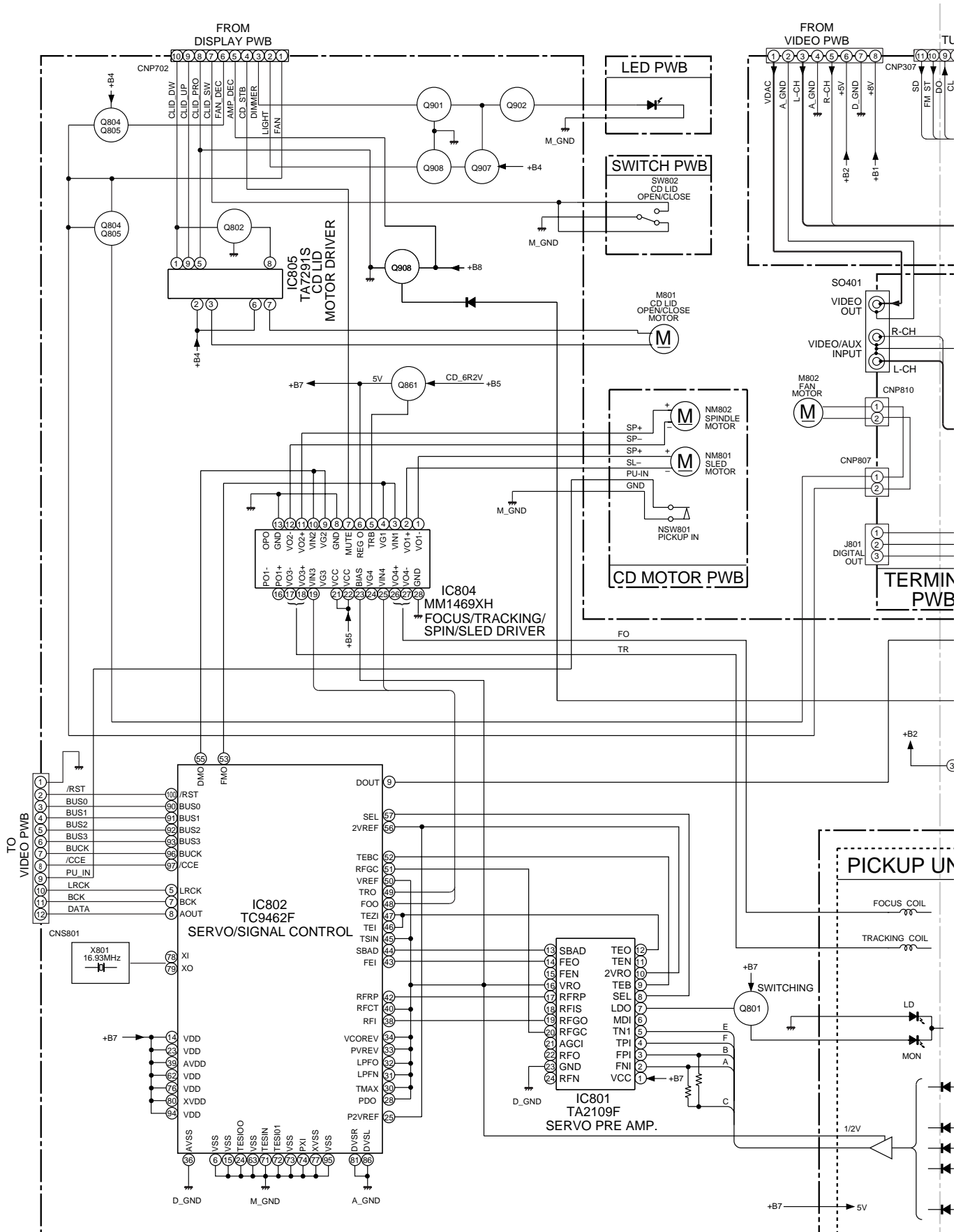


Figure 20 BLOCK DIAGRAM (1/6)

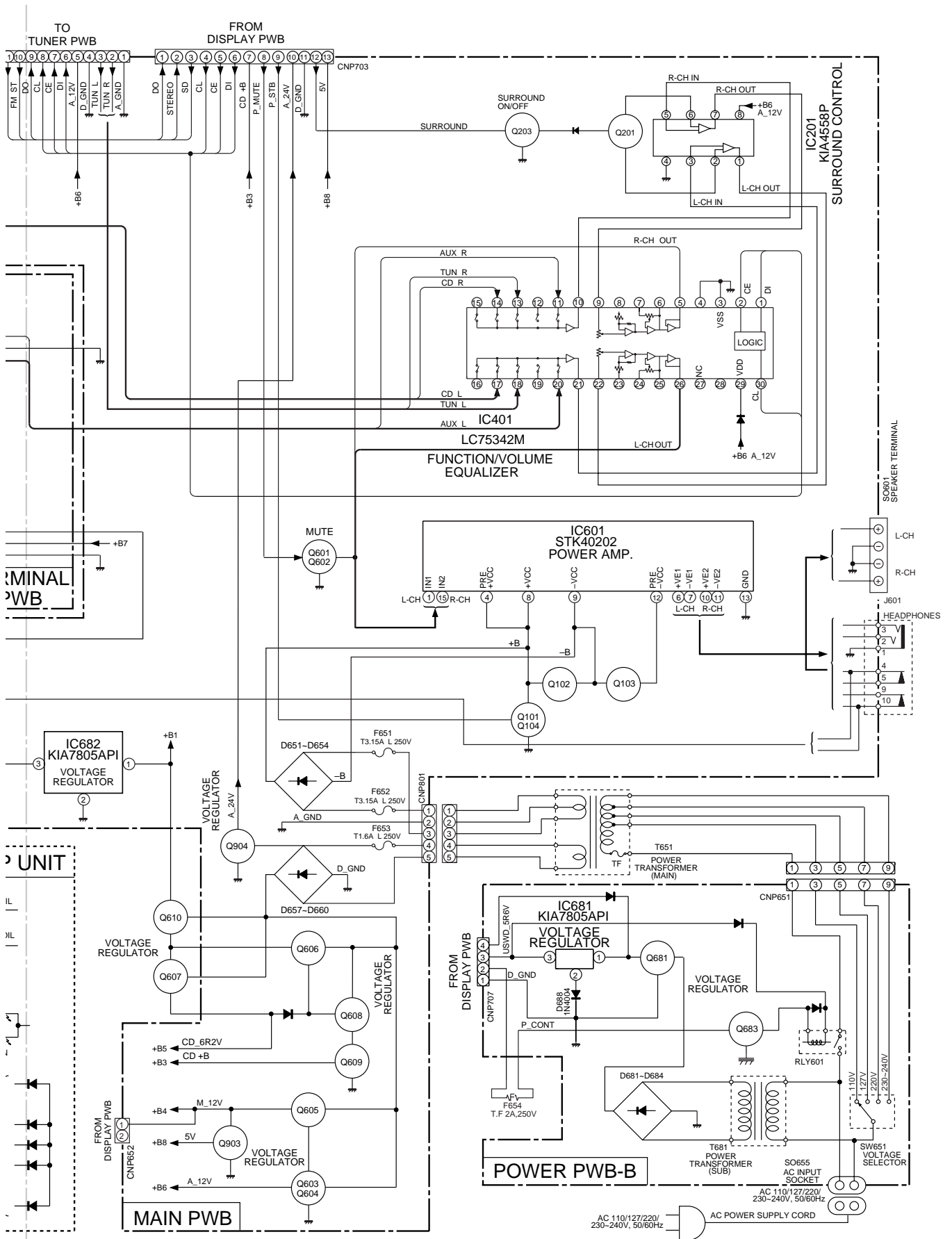
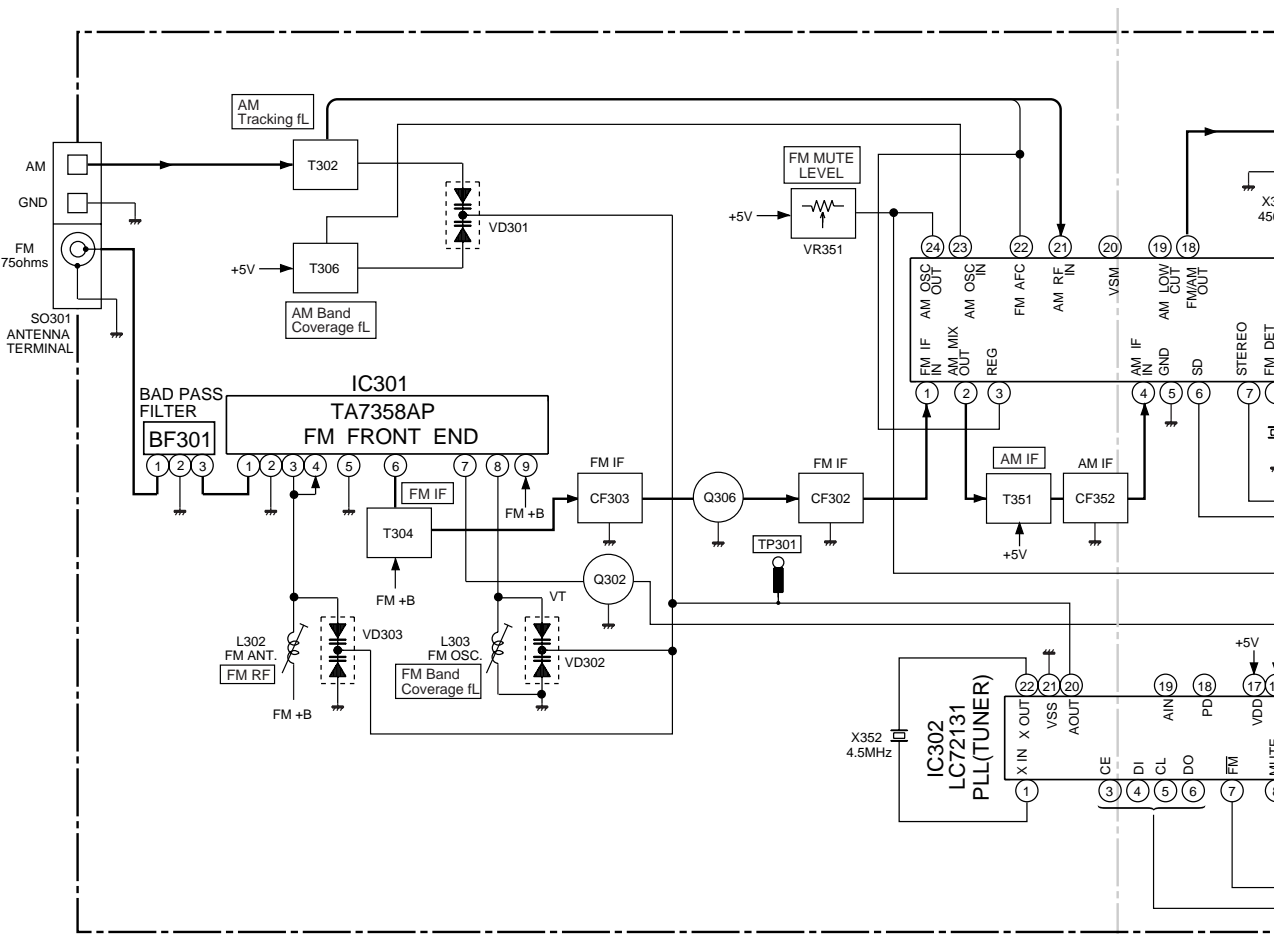


Figure 21 BLOCK DIAGRAM (2/6)



DISPLAY PWB

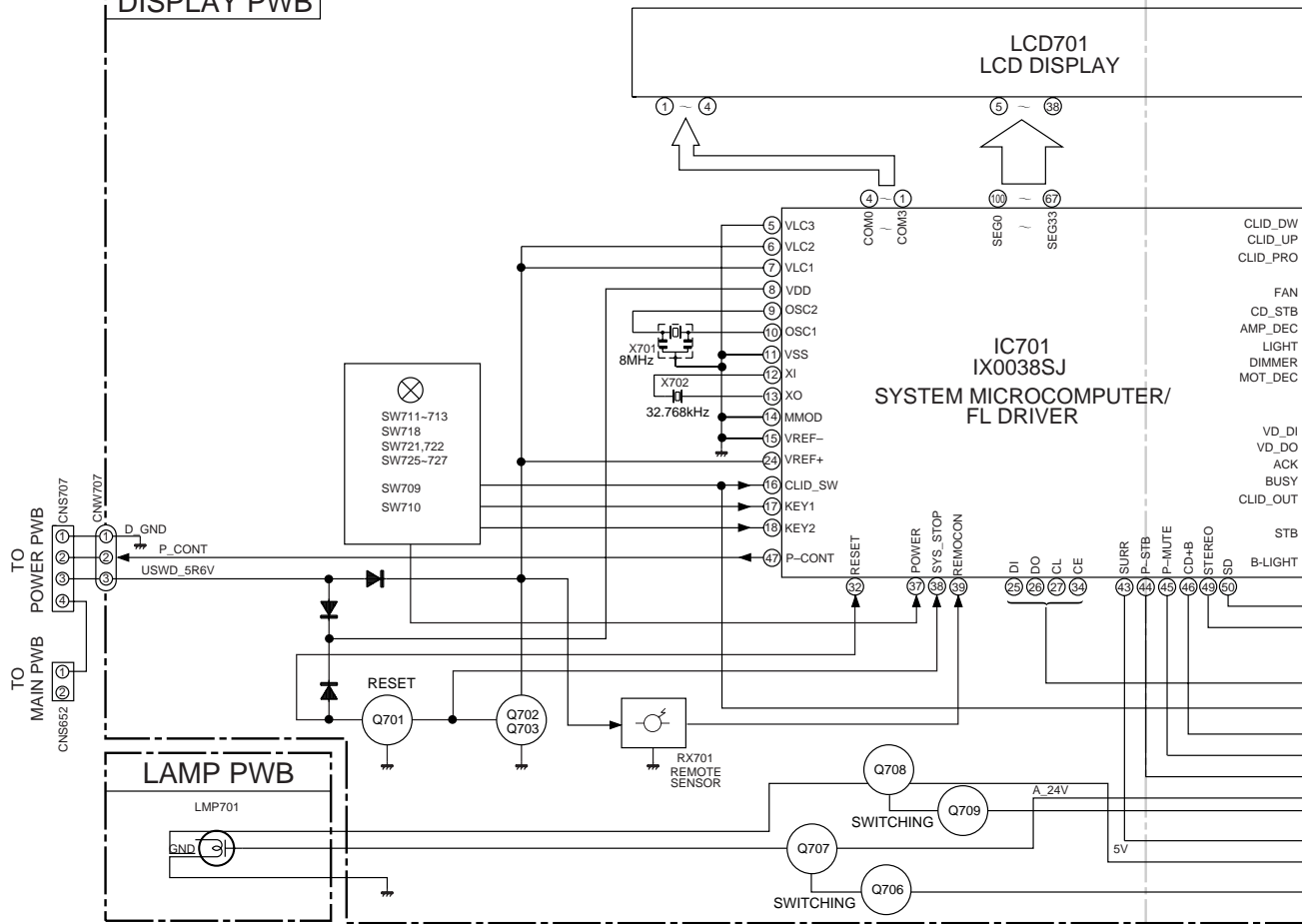


Figure 22 BLOCK DIAGRAM (3/6)

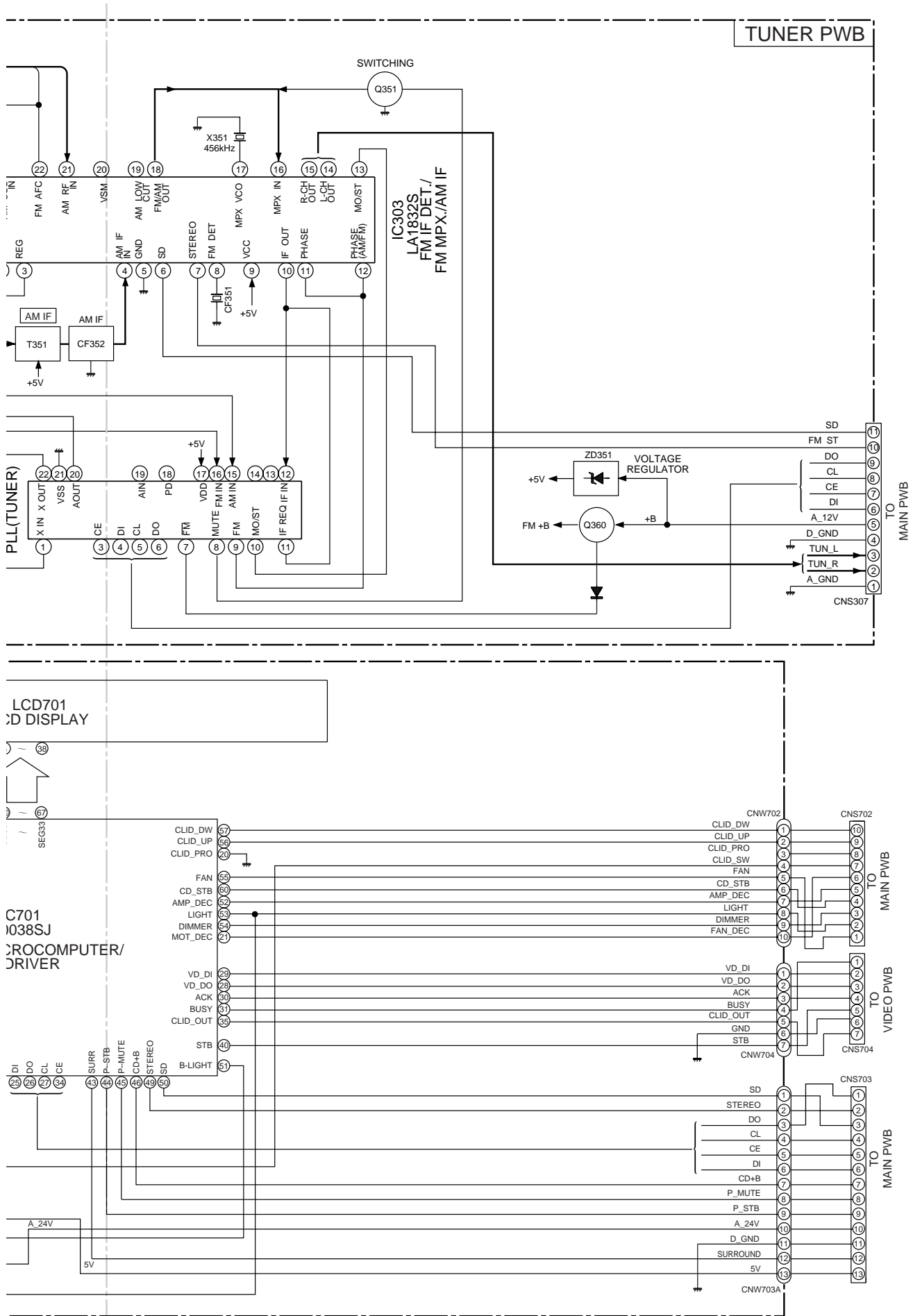


Figure 23 BLOCK DIAGRAM (4/6)

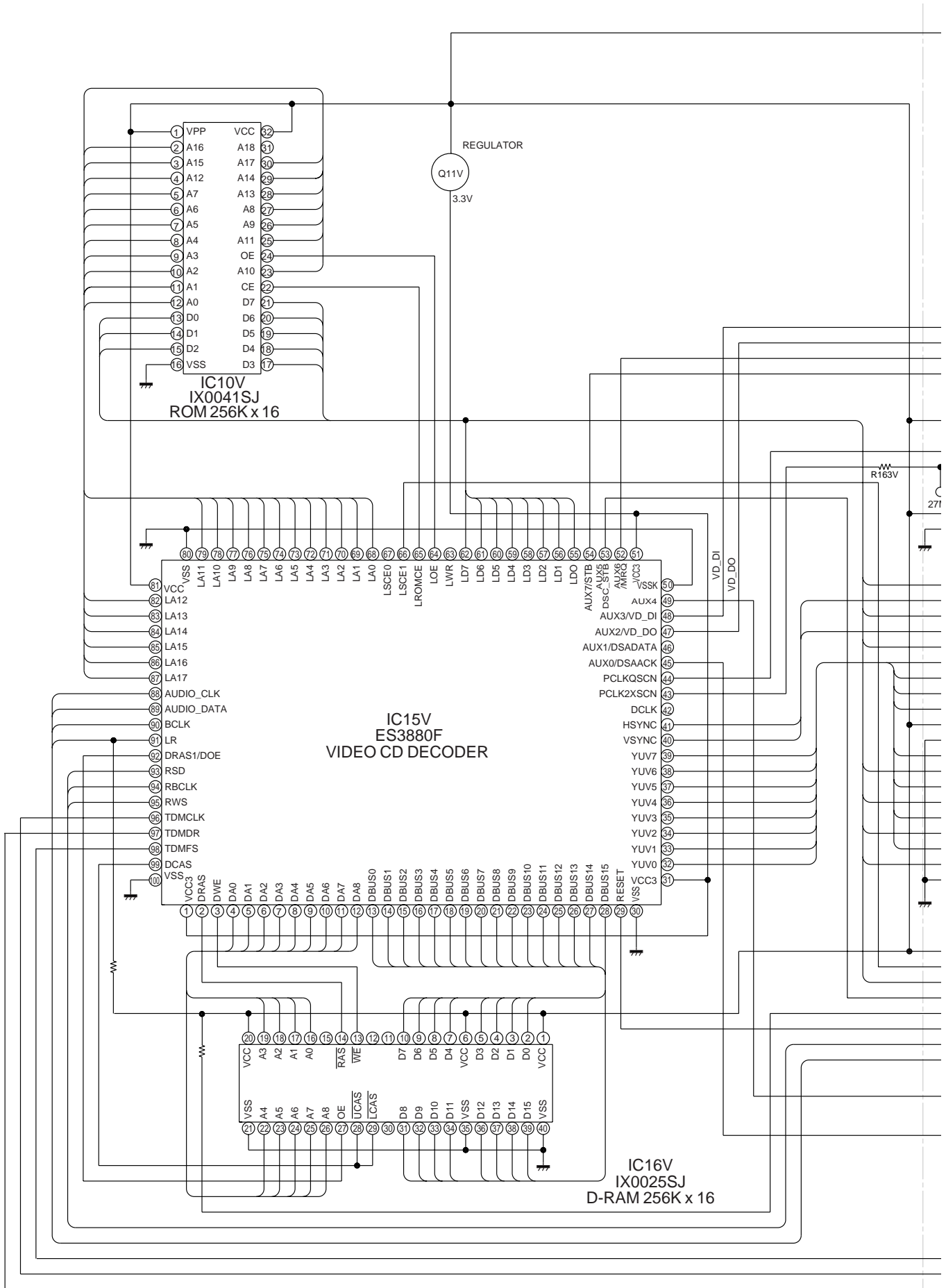


Figure 24 BLOCK DIAGRAM (5/6)

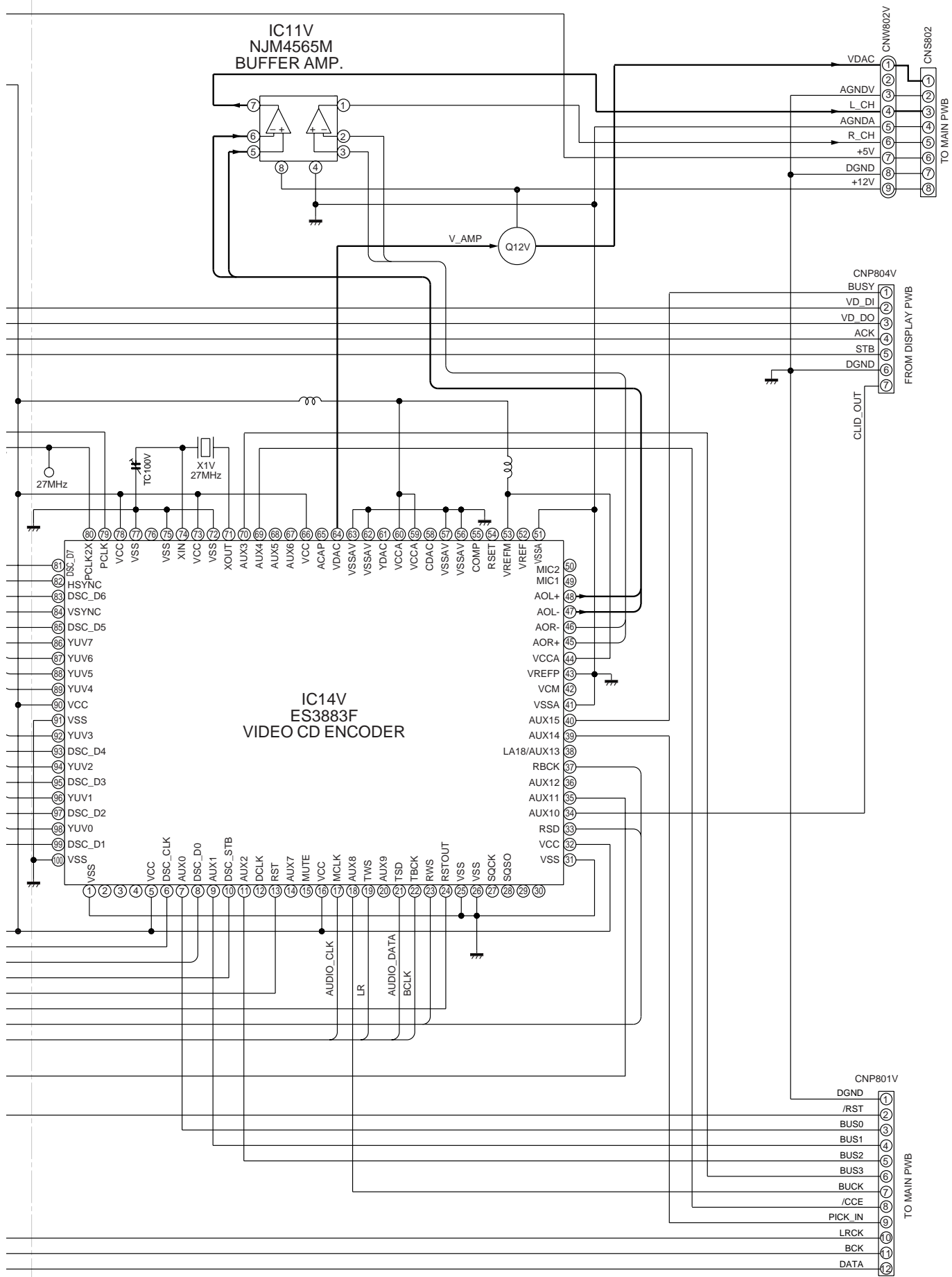
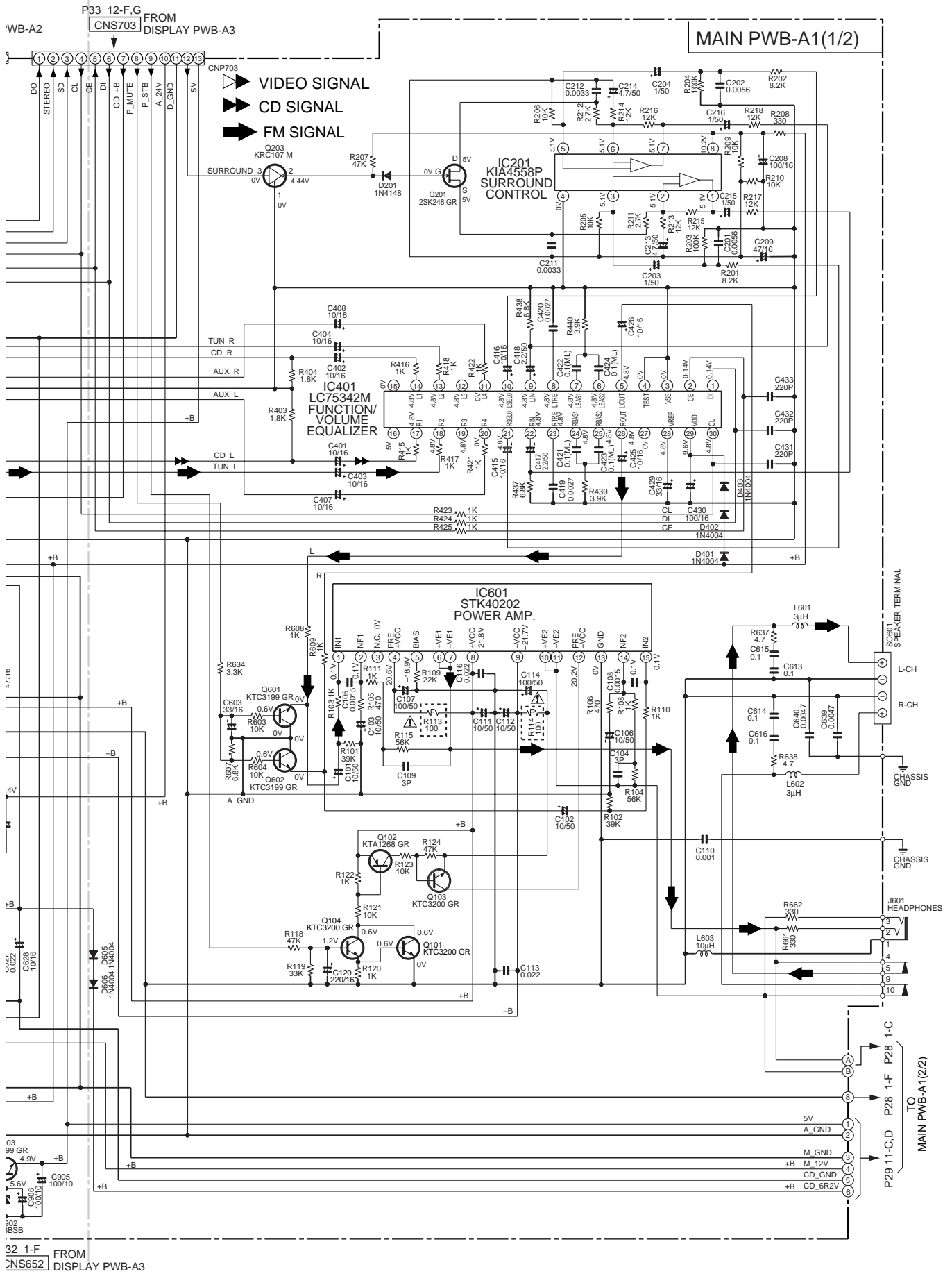
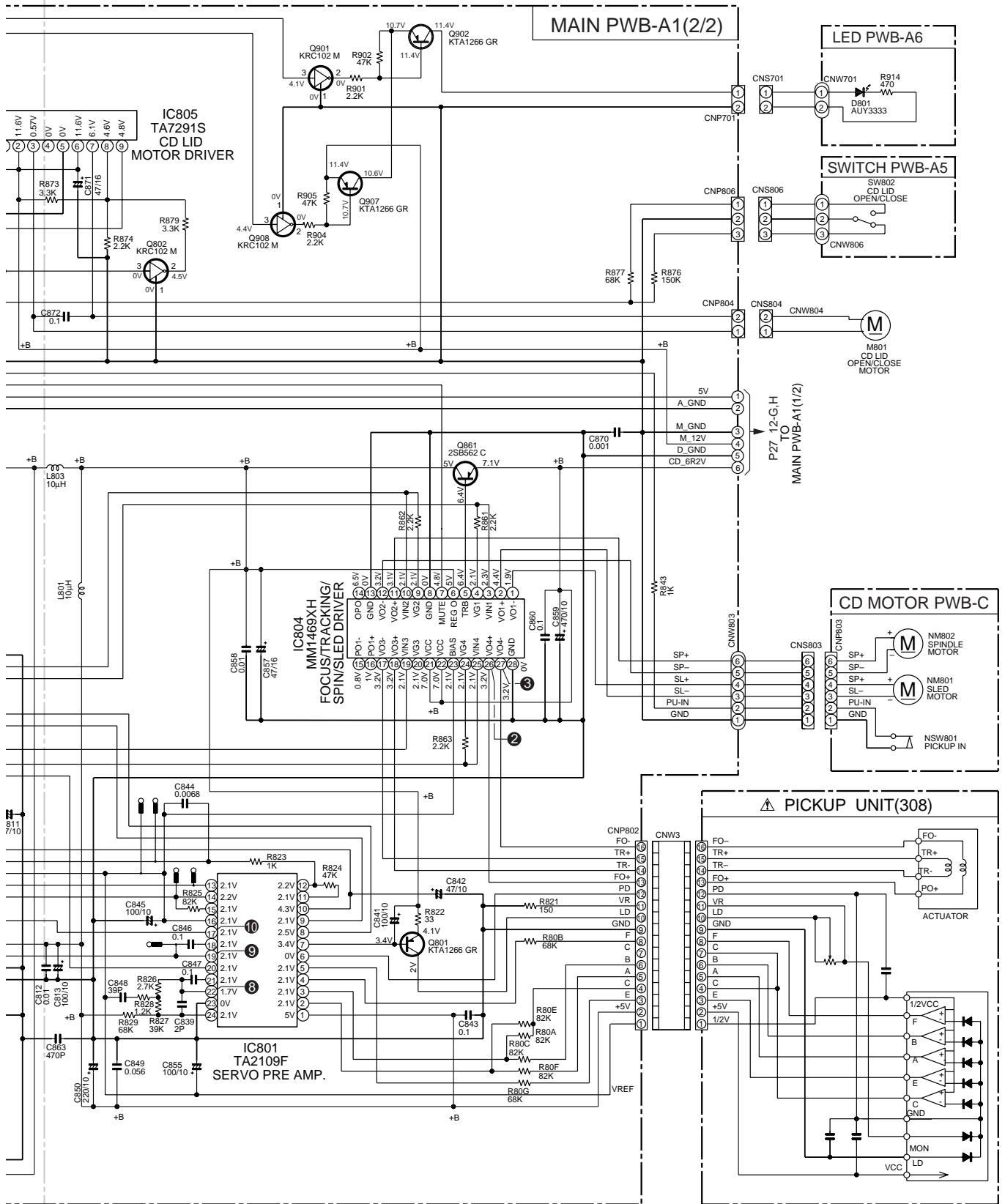


Figure 25 BLOCK DIAGRAM (6/6)



7	8	9	10	11	12
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Figure 27 SCHEMATIC DIAGRAM (2/10)



7	8	9	10	11	12
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Figure 29 SCHEMATIC DIAGRAM (4/10)

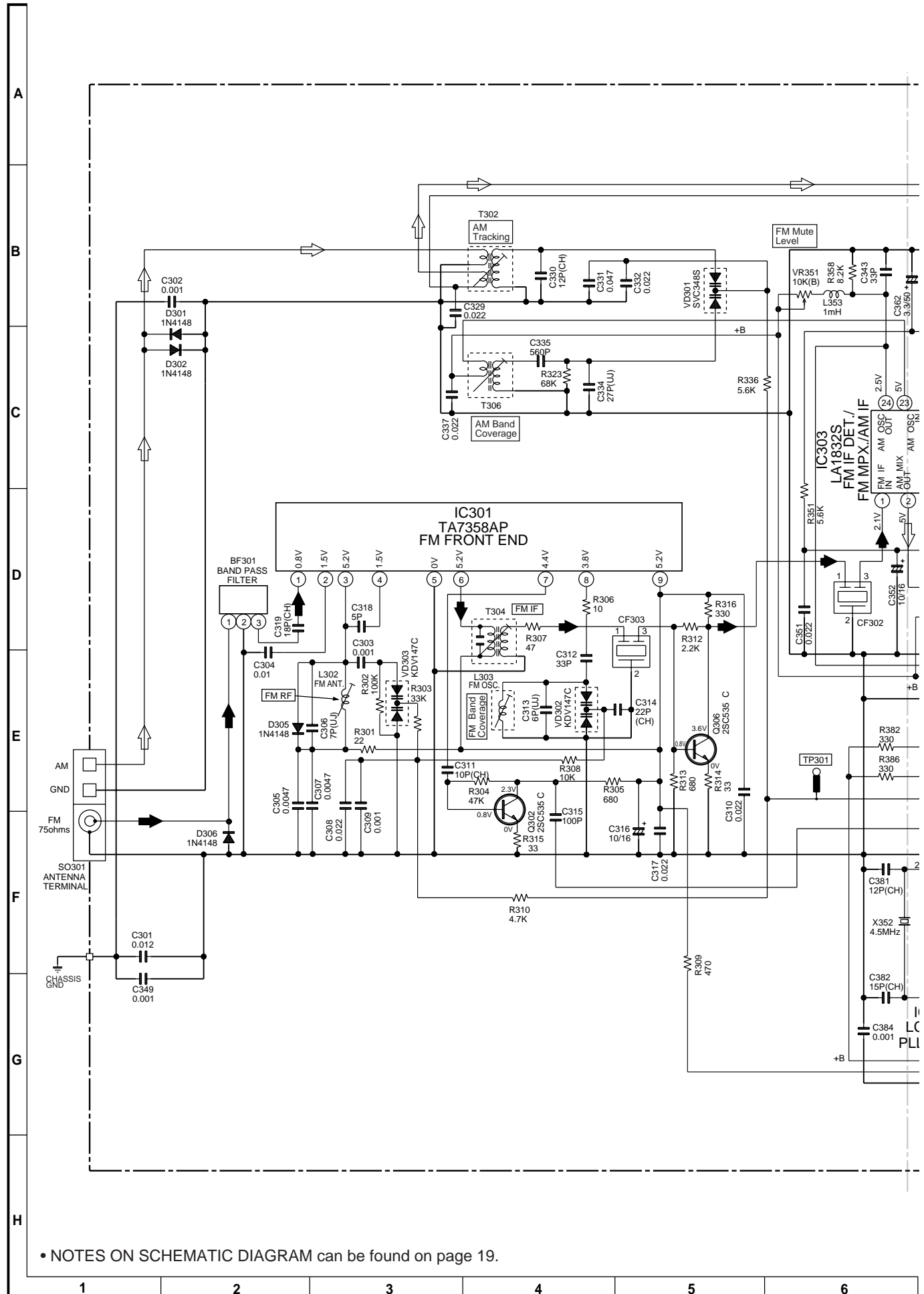


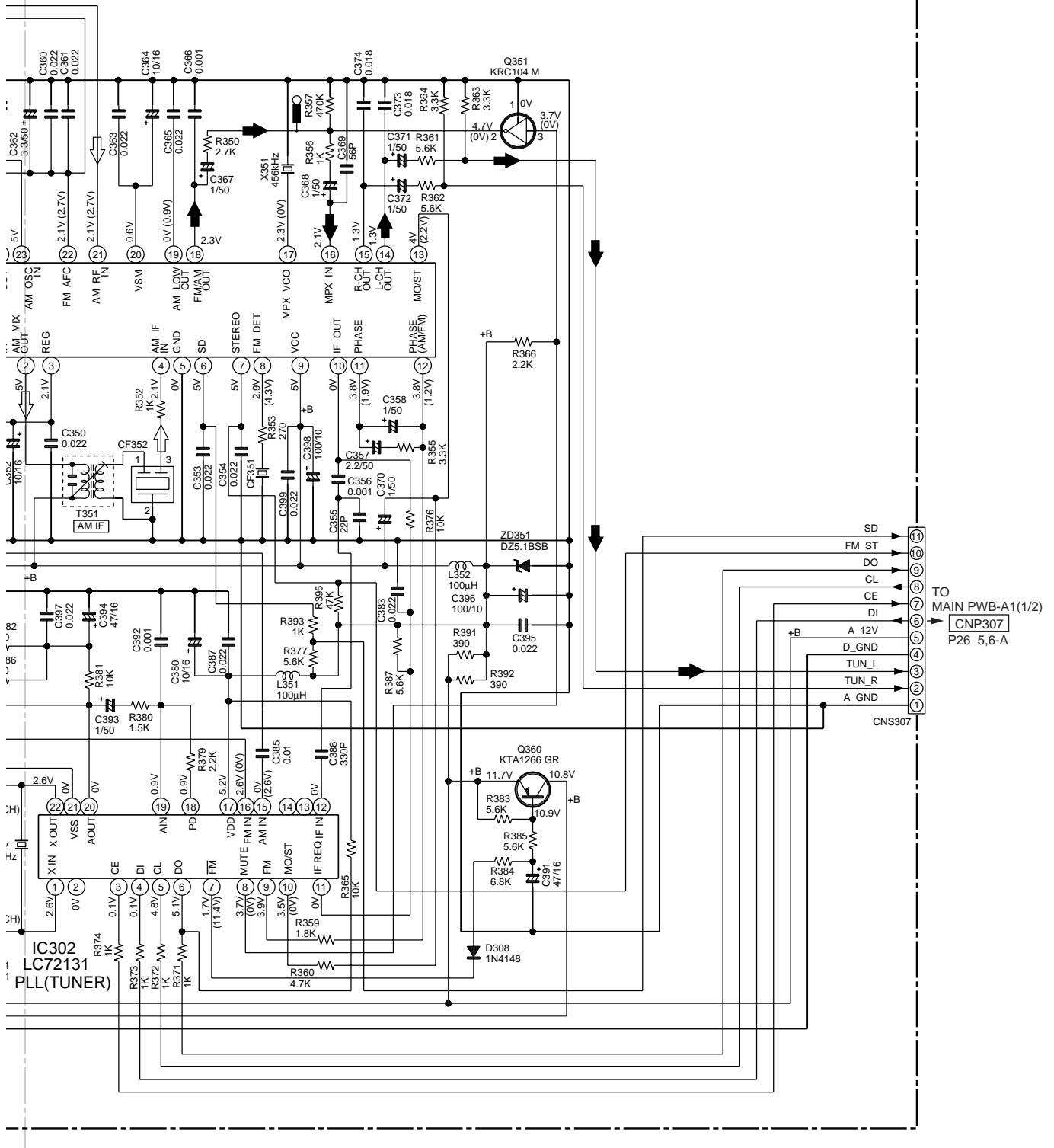


Figure 30 SCHEMATIC DIAGRAM (5/10)

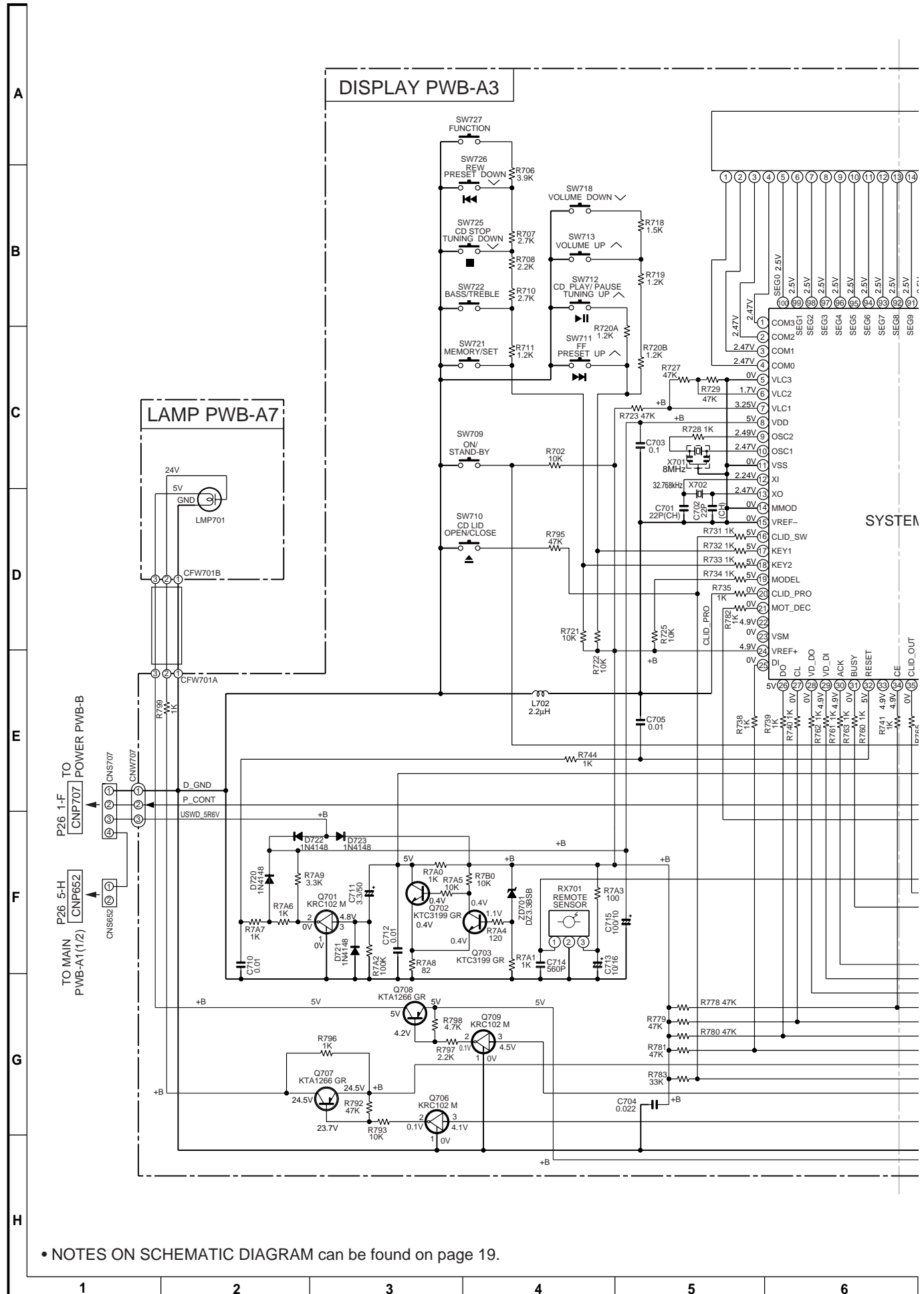
TUNER PWB-A2

 AM SIGNAL
 FM SIGNAL



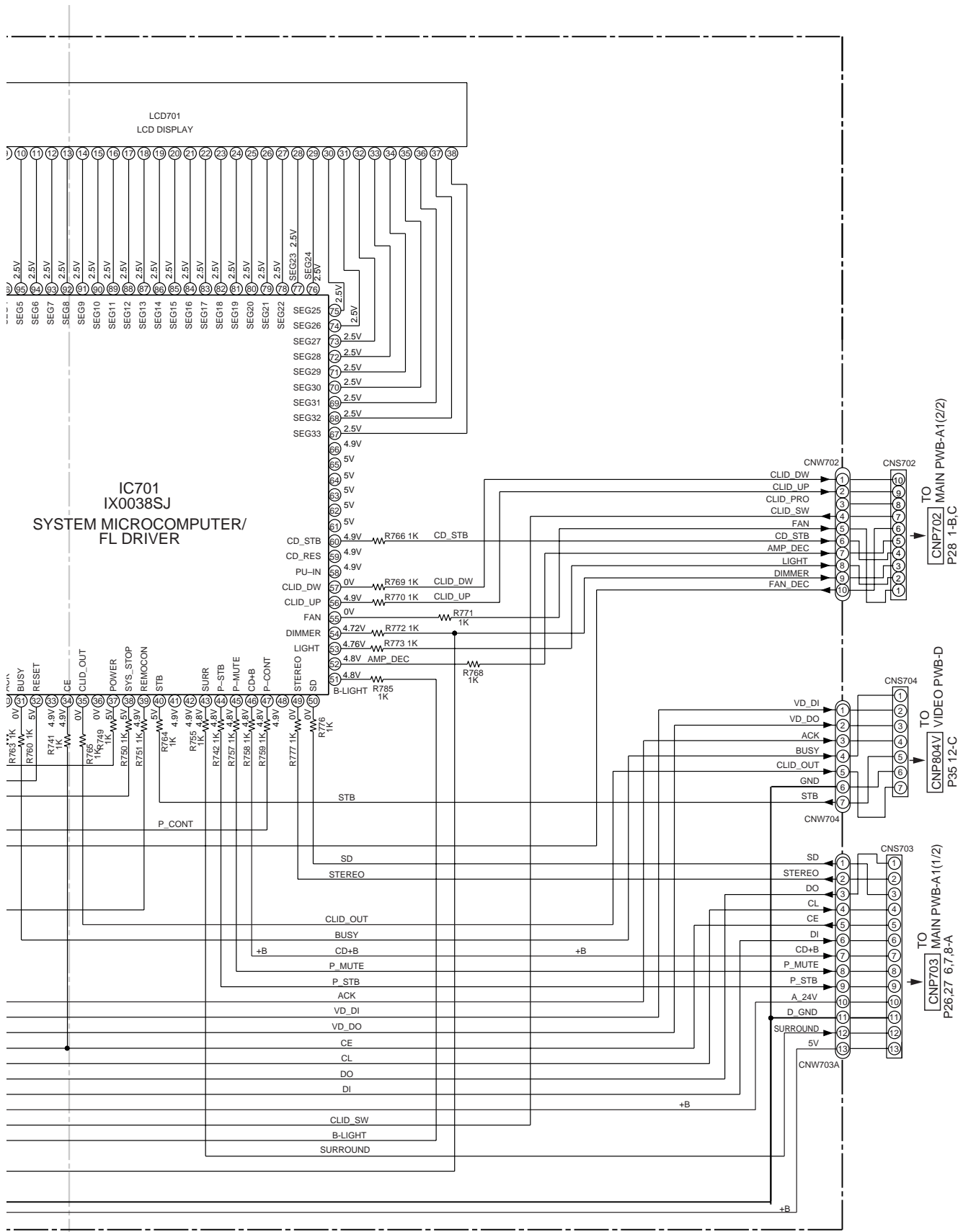
7	8	9	10	11	12
---	---	---	----	----	----

Figure 31 SCHEMATIC DIAGRAM (6/10)



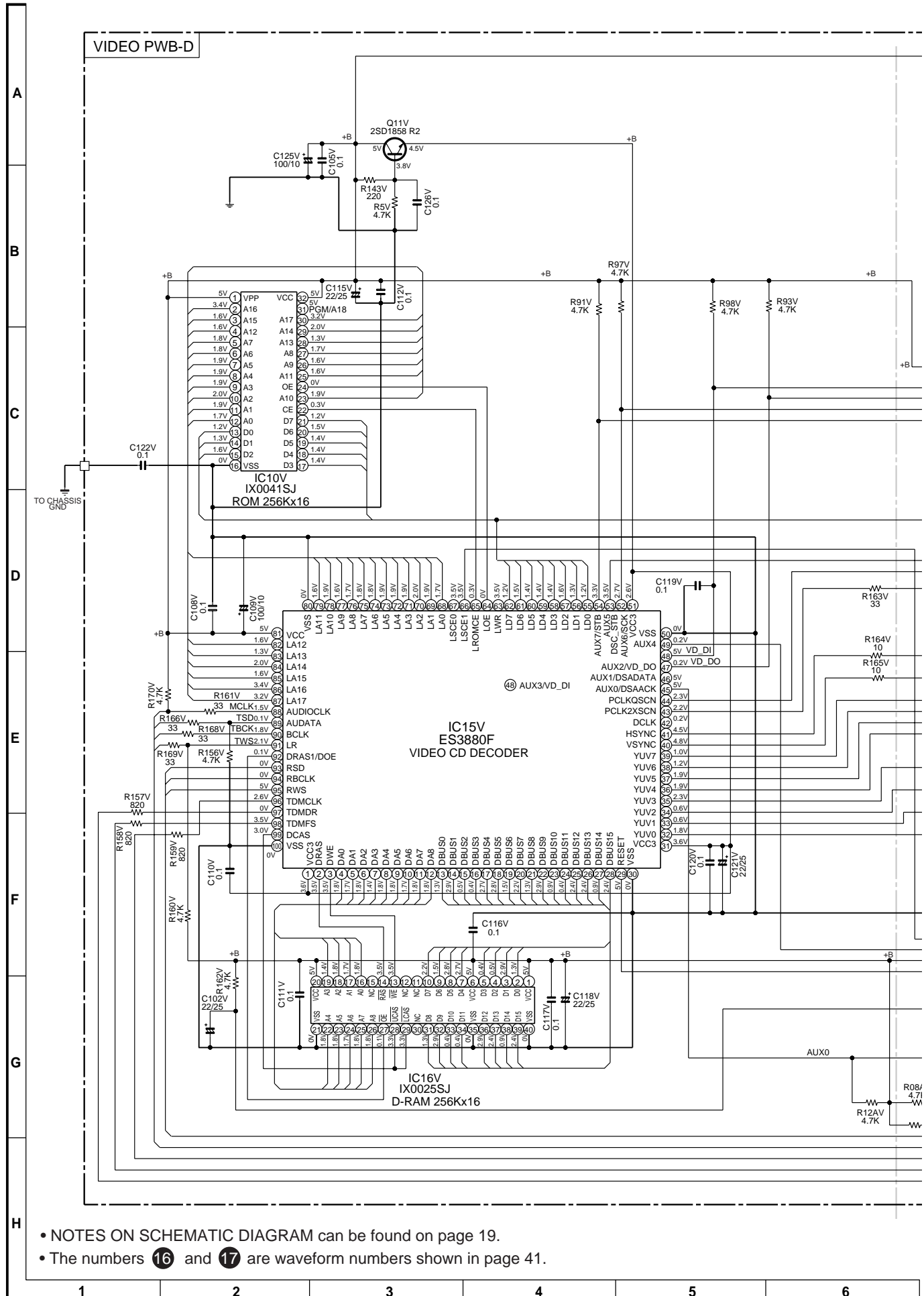
• NOTES ON SCHEMATIC DIAGRAM can be found on page 19.

Figure 32 SCHEMATIC DIAGRAM (7/10)
- 32 -



7	8	9	10	11	12
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Figure 33 SCHEMATIC DIAGRAM (8/10)



- NOTES ON SCHEMATIC DIAGRAM can be found on page 19.
- The numbers 16 and 17 are waveform numbers shown in page 41.

Figure 34 SCHEMATIC DIAGRAM (9/10)

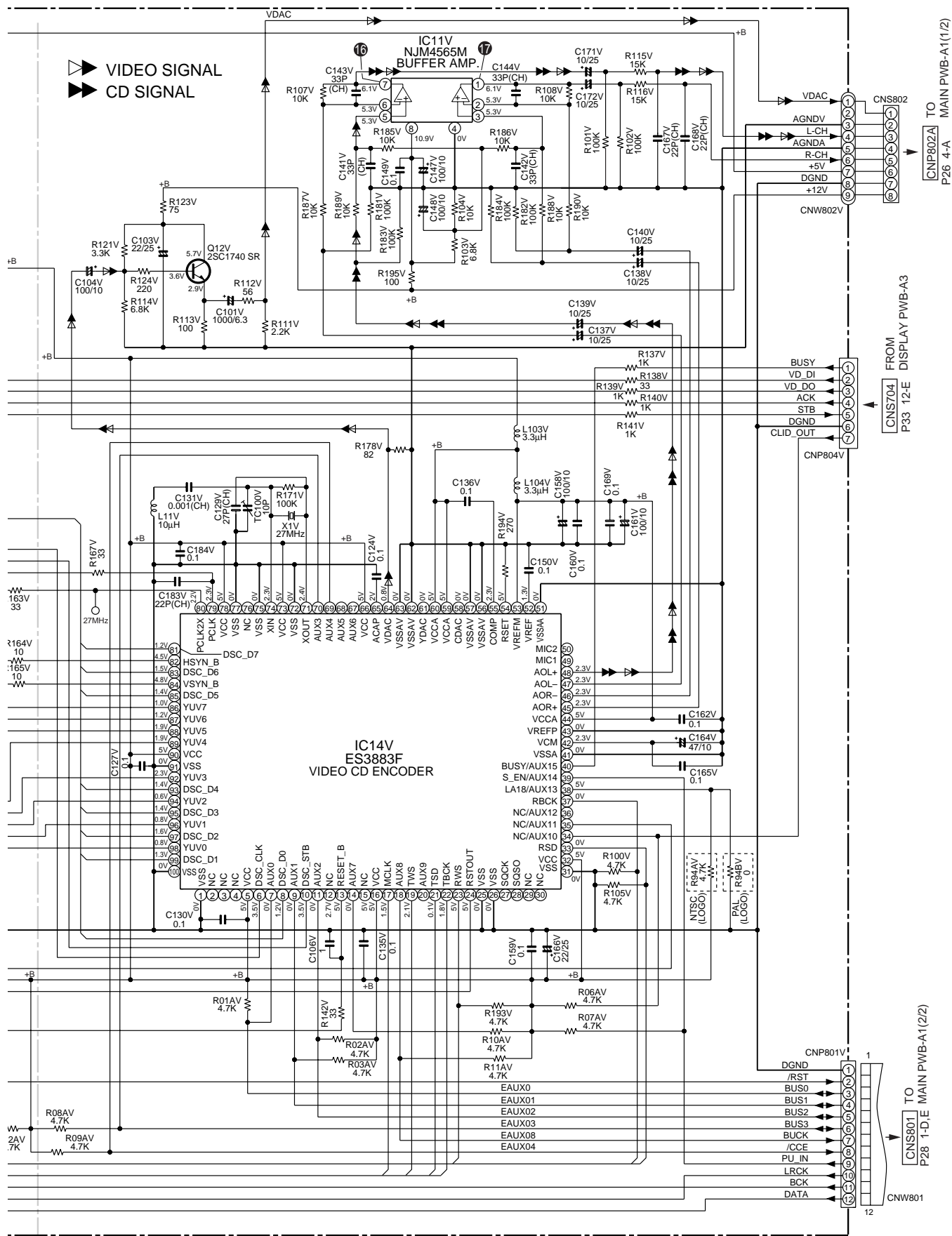
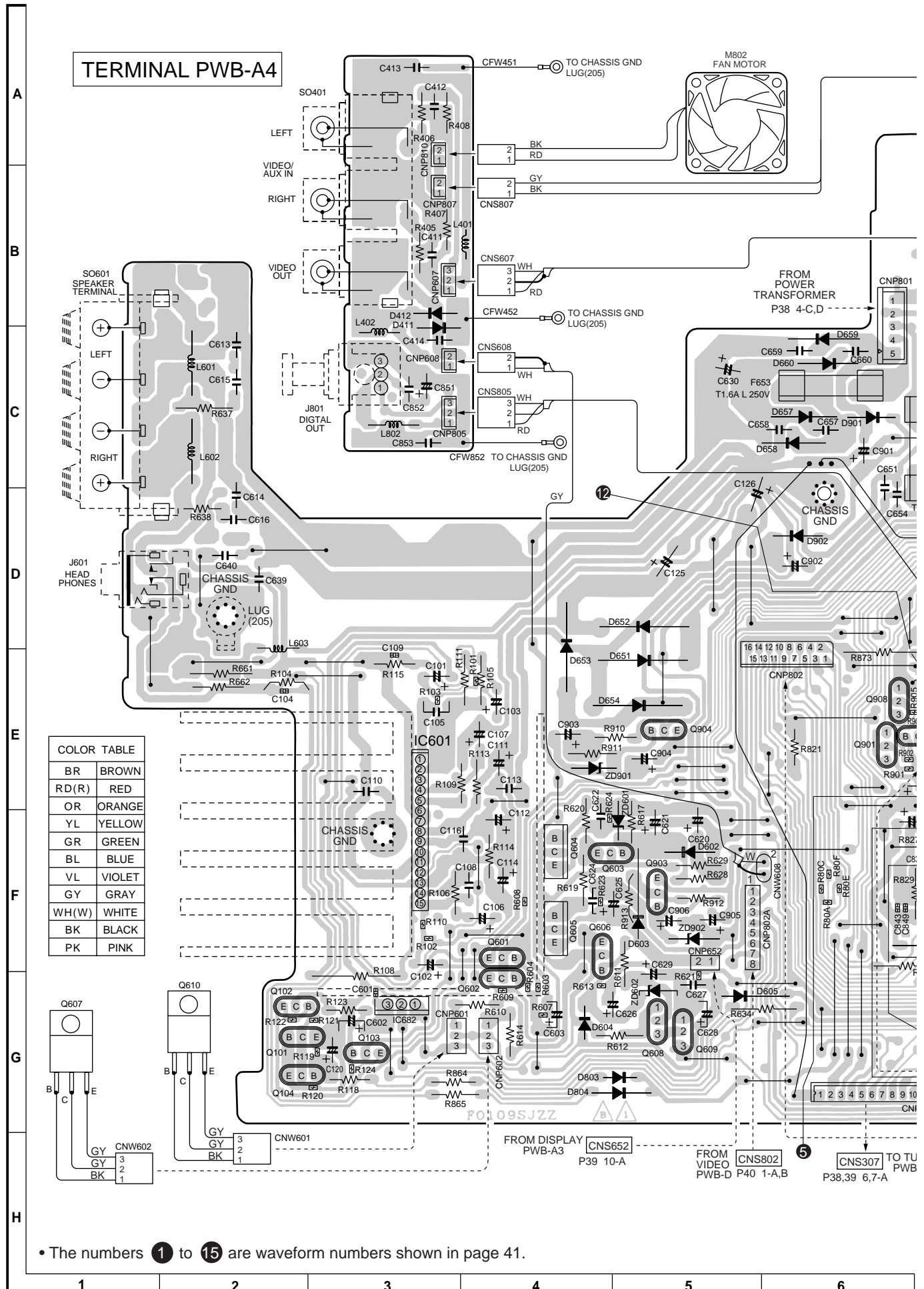


Figure 35 SCHEMATIC DIAGRAM (10/10)



TERMINAL PWB-A4

COLOR TABLE

BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

• The numbers 1 to 15 are waveform numbers shown in page 41.

Figure 36 WIRING SIDE OF P.W.BOARD (1/5)

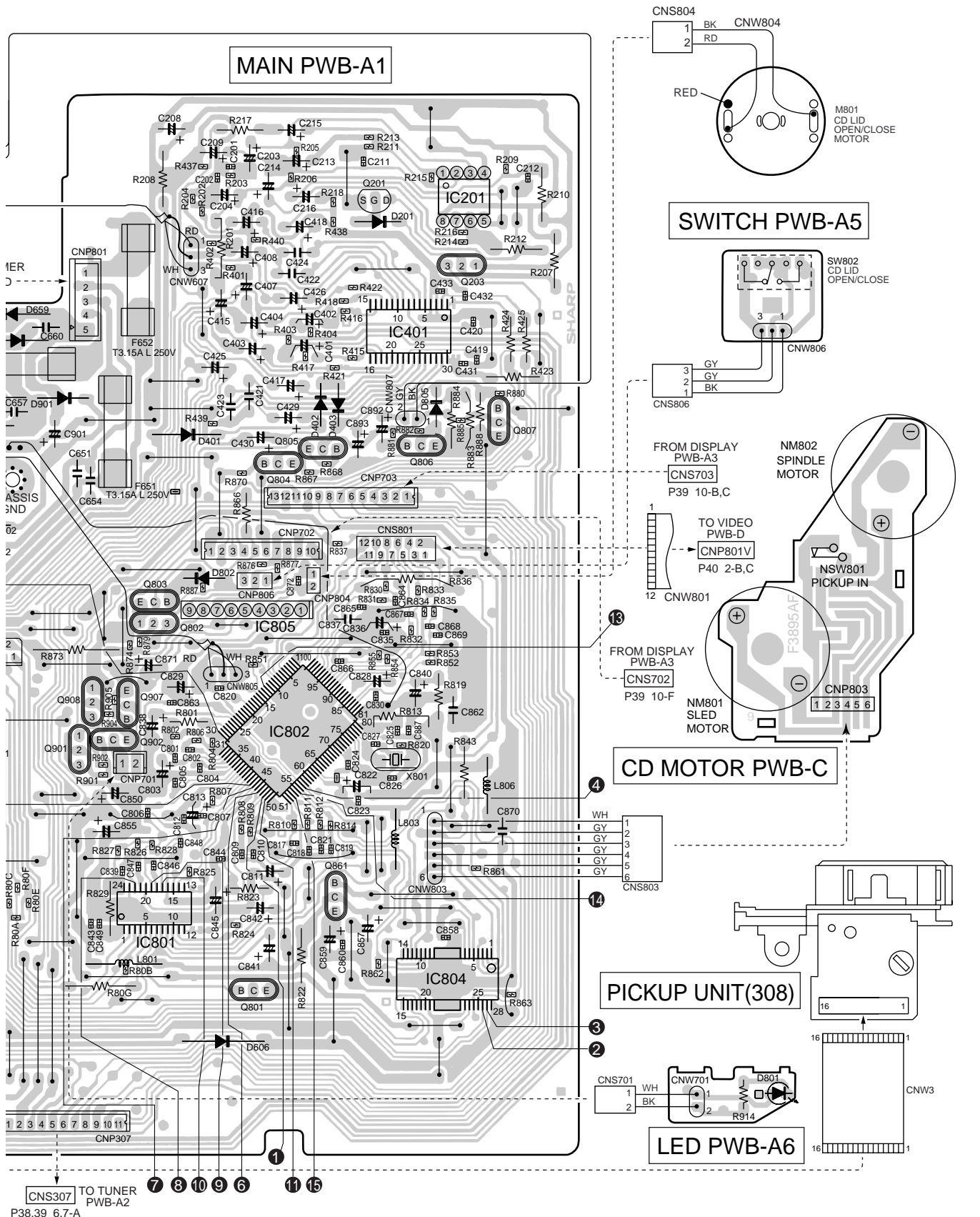


Figure 37 WIRING SIDE OF P.W.BOARD (2/5)

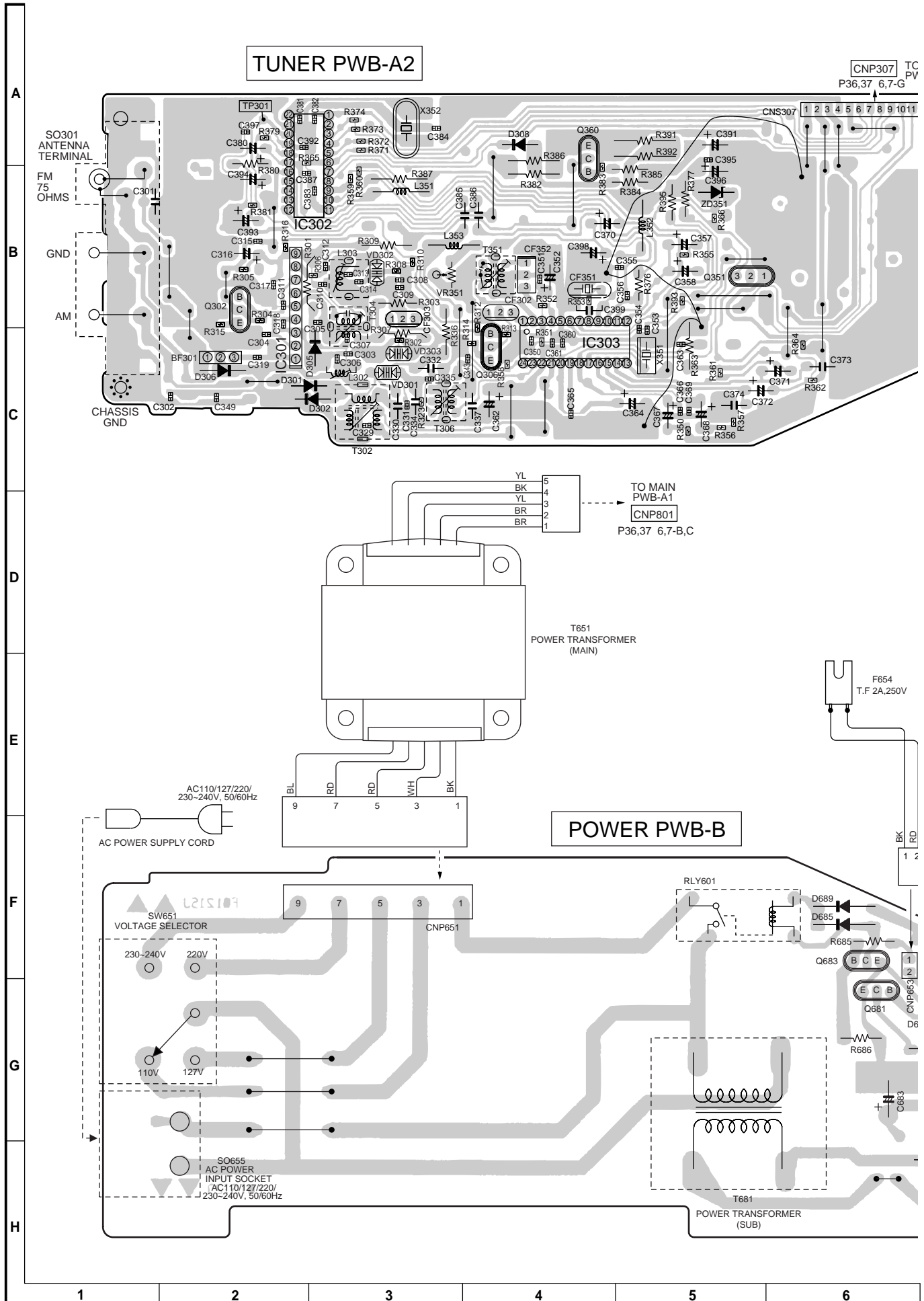


Figure 38 WIRING SIDE OF P.W.BOARD (3/5)

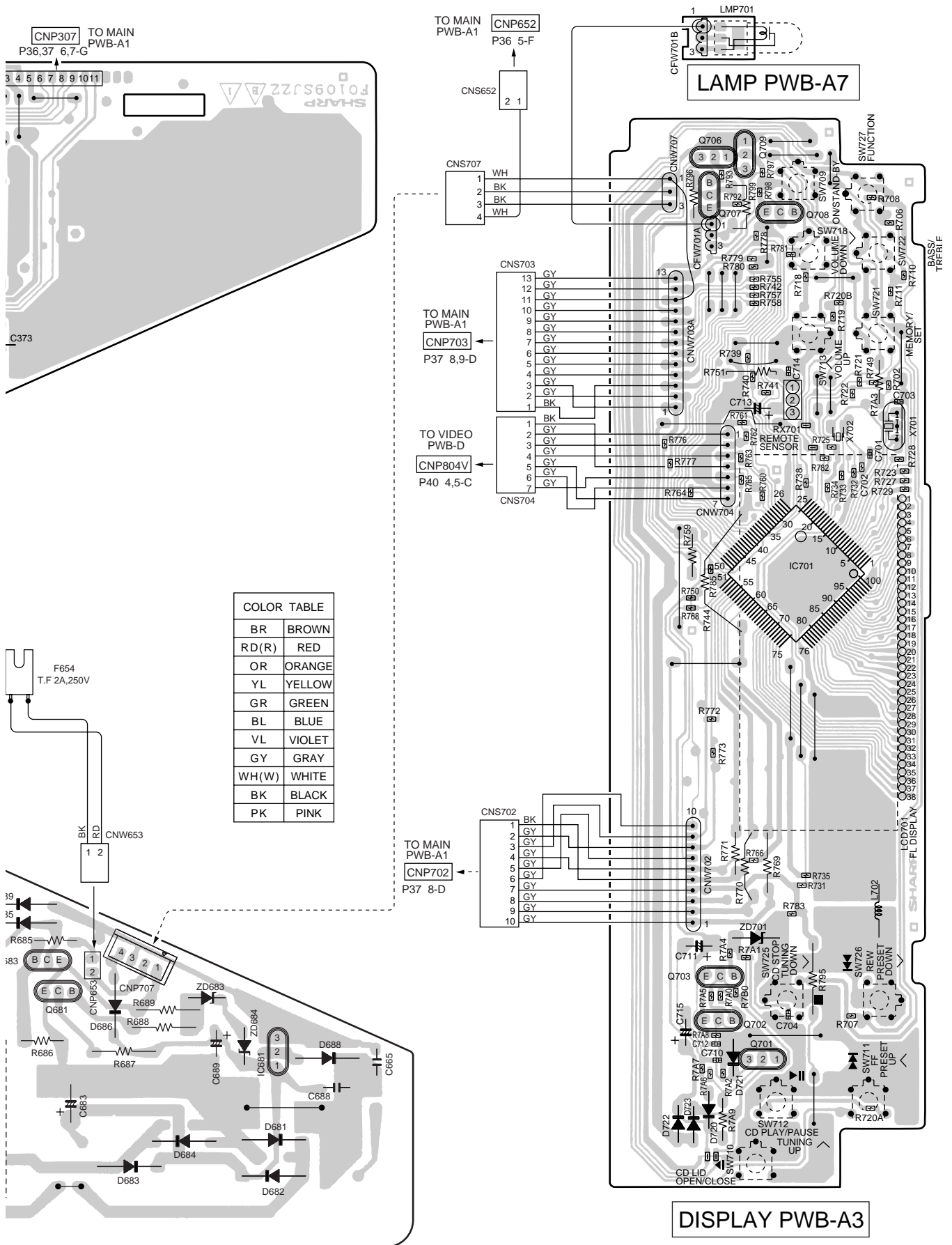
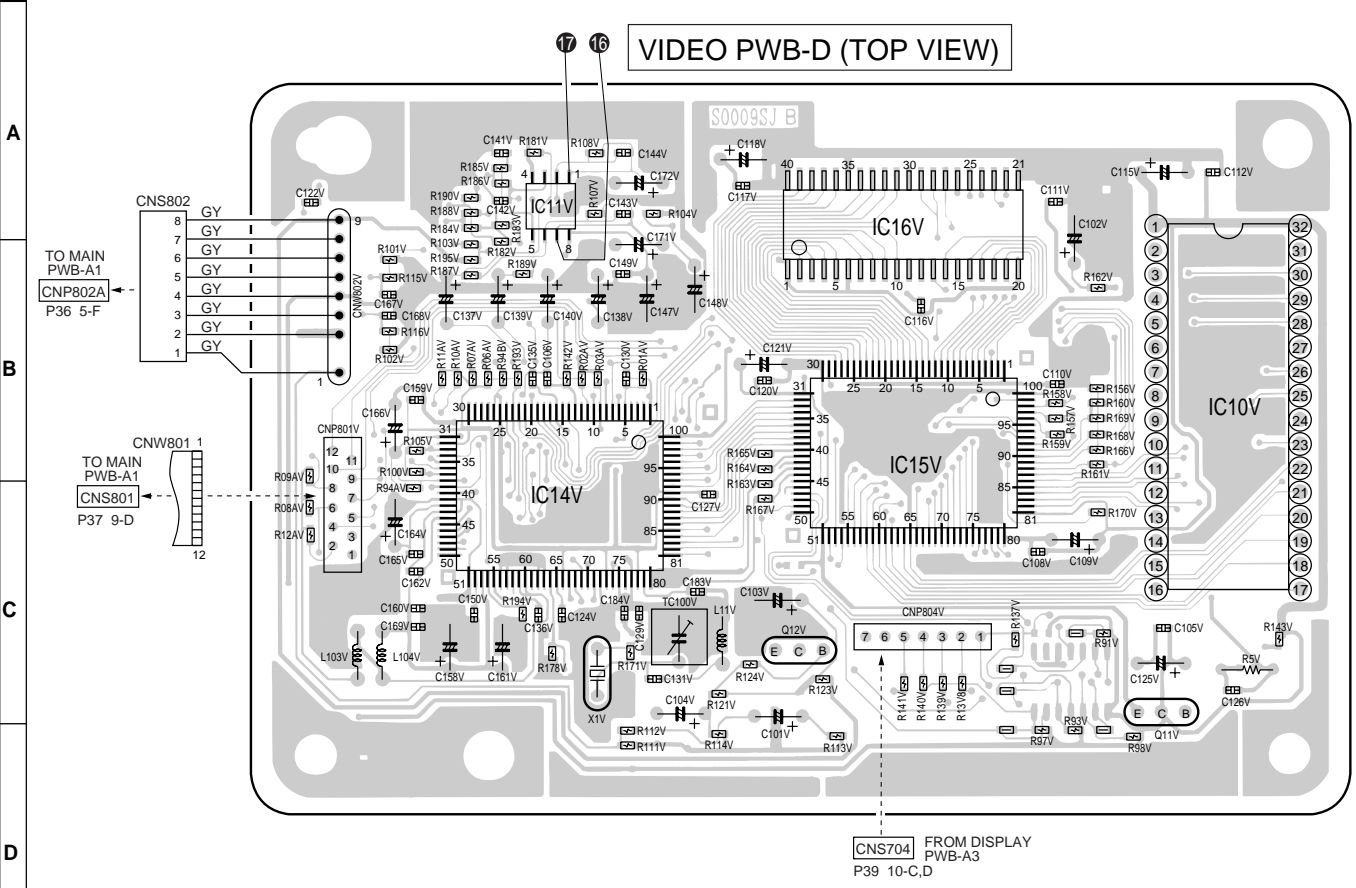
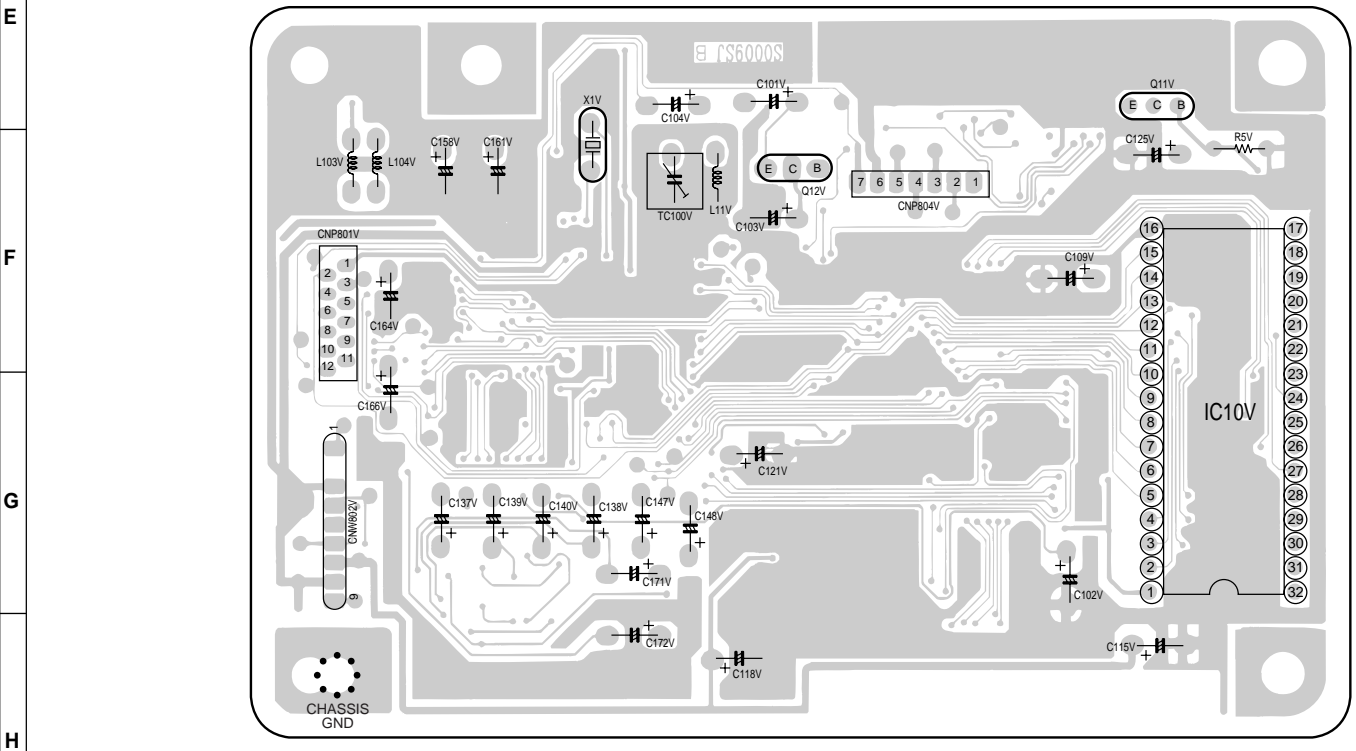


Figure 39 WIRING SIDE OF P.W.BOARD (4/5)

VIDEO PWB-D (TOP VIEW)



VIDEO PWB-D (BOTTOM VIEW)



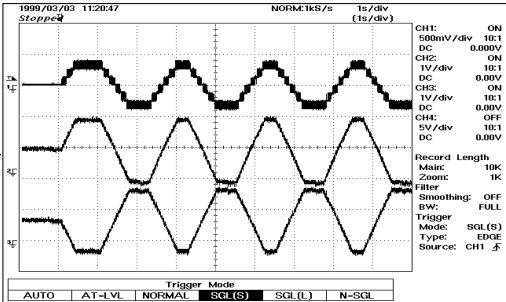
• The numbers 16 and 17 are waveform numbers shown in page 41.

Figure 40 WIRING SIDE OF P.W.BOARD (5/5)

WAVEFORMS OF CD CIRCUIT

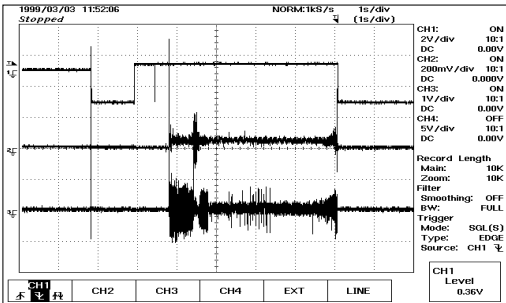
NO DISC FOCUS SEARCH

- 1 IC802 48pin
- 2 IC804 26pin
- 3 IC804 27pin



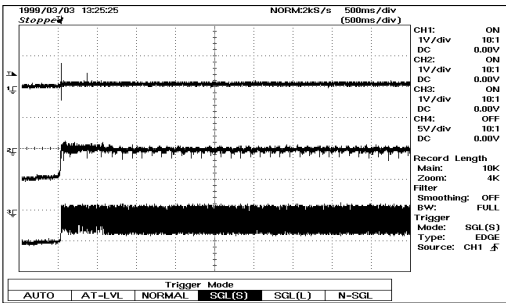
FOCUS SEARCH → TOC IL

- 4 IC802 57pin
- 5 IC802 43pin
- 6 IC802 46pin



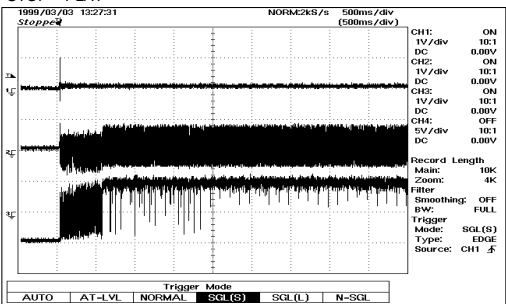
STOP → PLAY

- 5 IC802 43pin
- 7 IC802 44pin
- 8 IC801 22pin



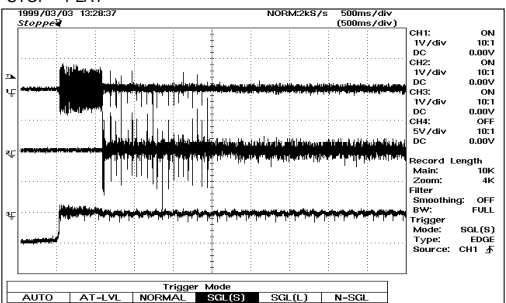
STOP → PLAY

- 5 IC802 43pin
- 9 IC801 19pin
- 10 IC801 17pin



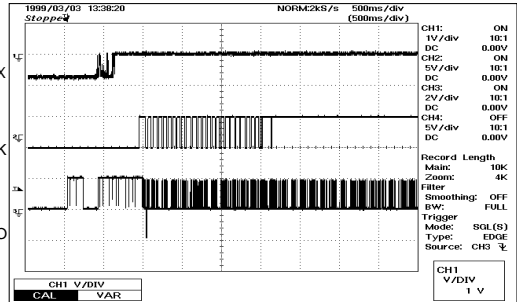
STOP → PLAY

- 6 IC802 46pin
- 11 IC802 49pin
- 7 IC802 44pin



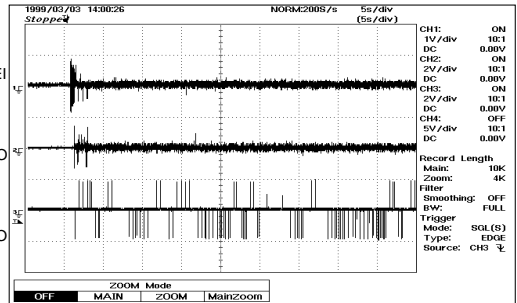
STOP → PLAY

- 12 TMAX
- 13 SBOK
- 14 DMO



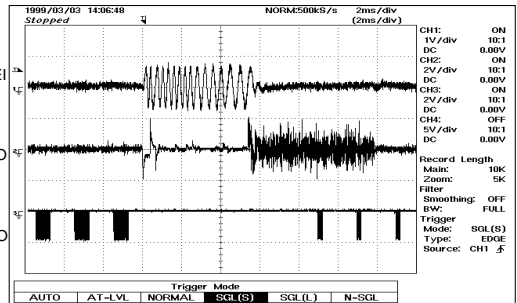
STOP → PLAY

- 6 IC802 46pin
- 11 IC802 49pin
- 15 IC802 53pin



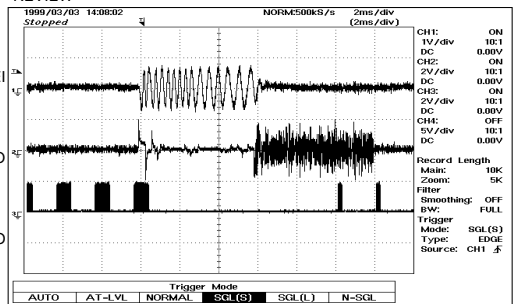
CUE

- 6 IC802 46pin
- 11 IC802 49pin
- 15 IC802 53pin



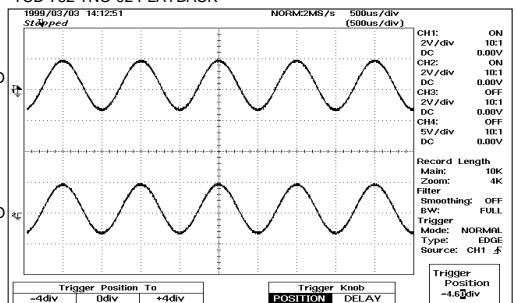
REVIEW

- 6 IC802 46pin
- 11 IC802 49pin
- 15 IC802 53pin



TCD-782 TNO-02 PLAYBACK

- 16 IC11V 7pin
- 17 IC11V 1pin



TROUBLESHOOTING

When the CD does not function

When the CD section does not operate when the objective lens of the optical pickup is dirty, this section may not operate. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.

Remove the cabinet and follow the troubleshooting instructions.

"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

Turn off the power, and wipe the lens softly using a cleaning paper moistened with commercially available cleaning solution so as not to damage it.

Be careful not to touch the lens with bare hands.

Dust gradually accumulates on the objective lens during use, and it may degrade performance.

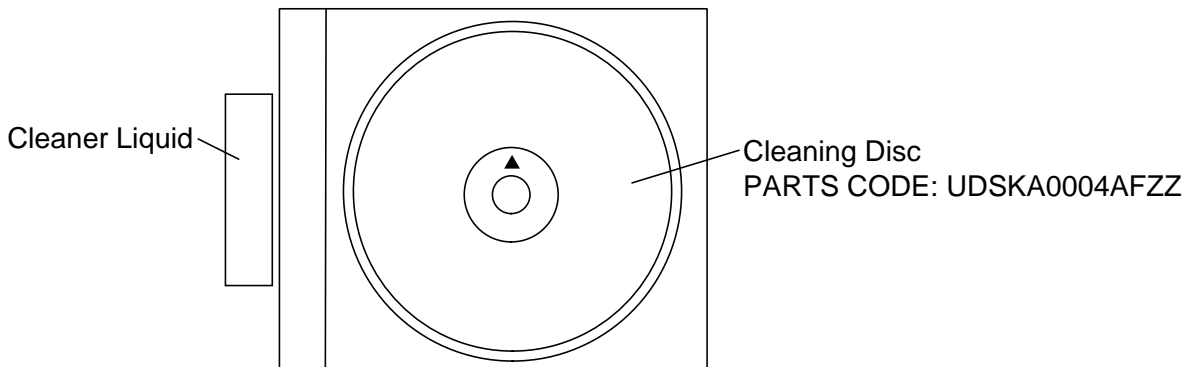
To avoid this problem, use a cleaning disc designed for CD optical pickup lenses.

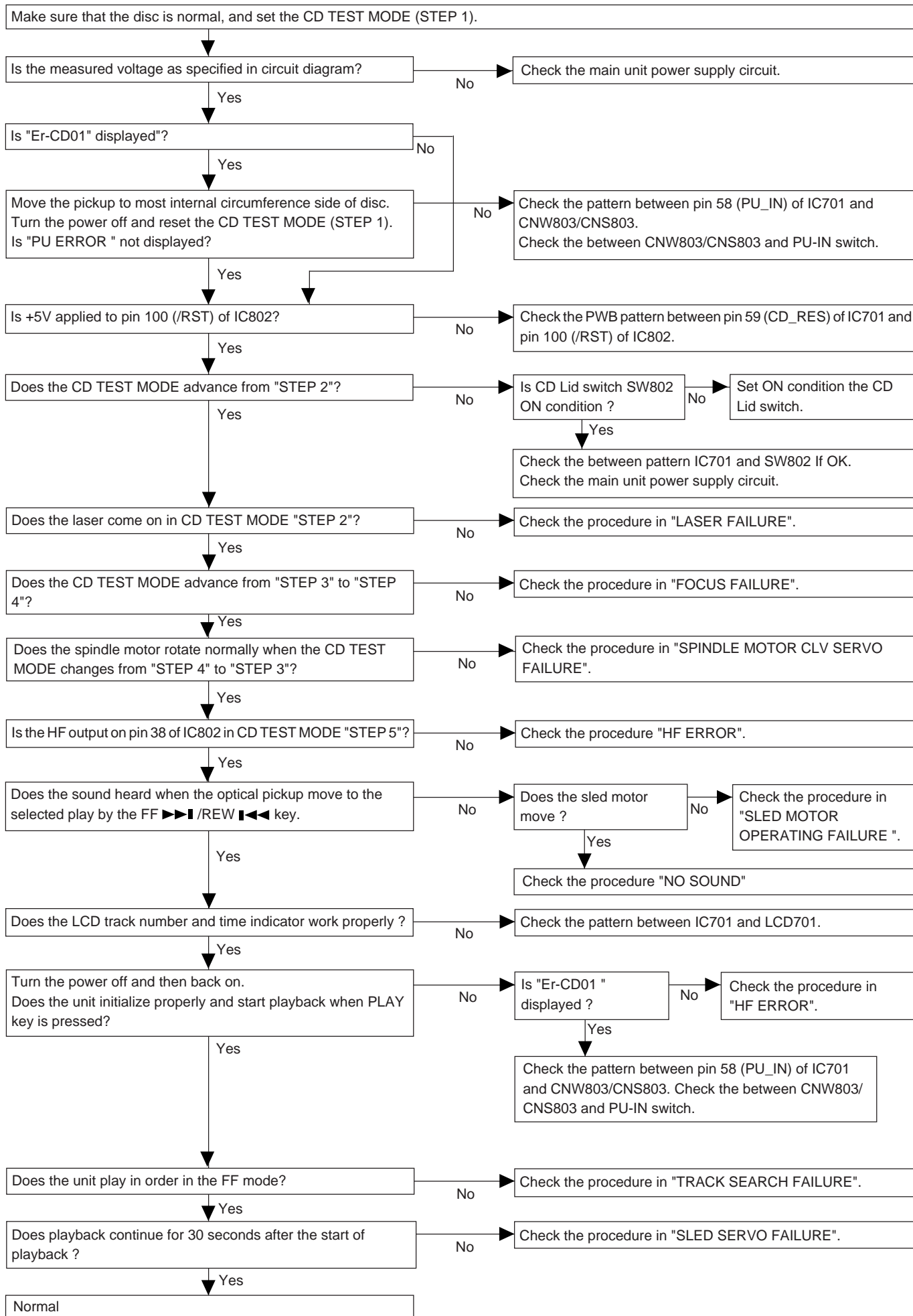
HOW TO USE

1. Using the brush in the cleaner cap, apply 1 or 2 drops of the cleaning fluid to the brush on the CD cleaner disc which has ▲ the mark next to it.
2. Place the CD cleaner disc onto the CD disc tray with the brush side down, then press the play button.
3. You will hear music for about 20 seconds and the CD player will automatically stop. If it continues to turn, press the stop button.

CAUTION

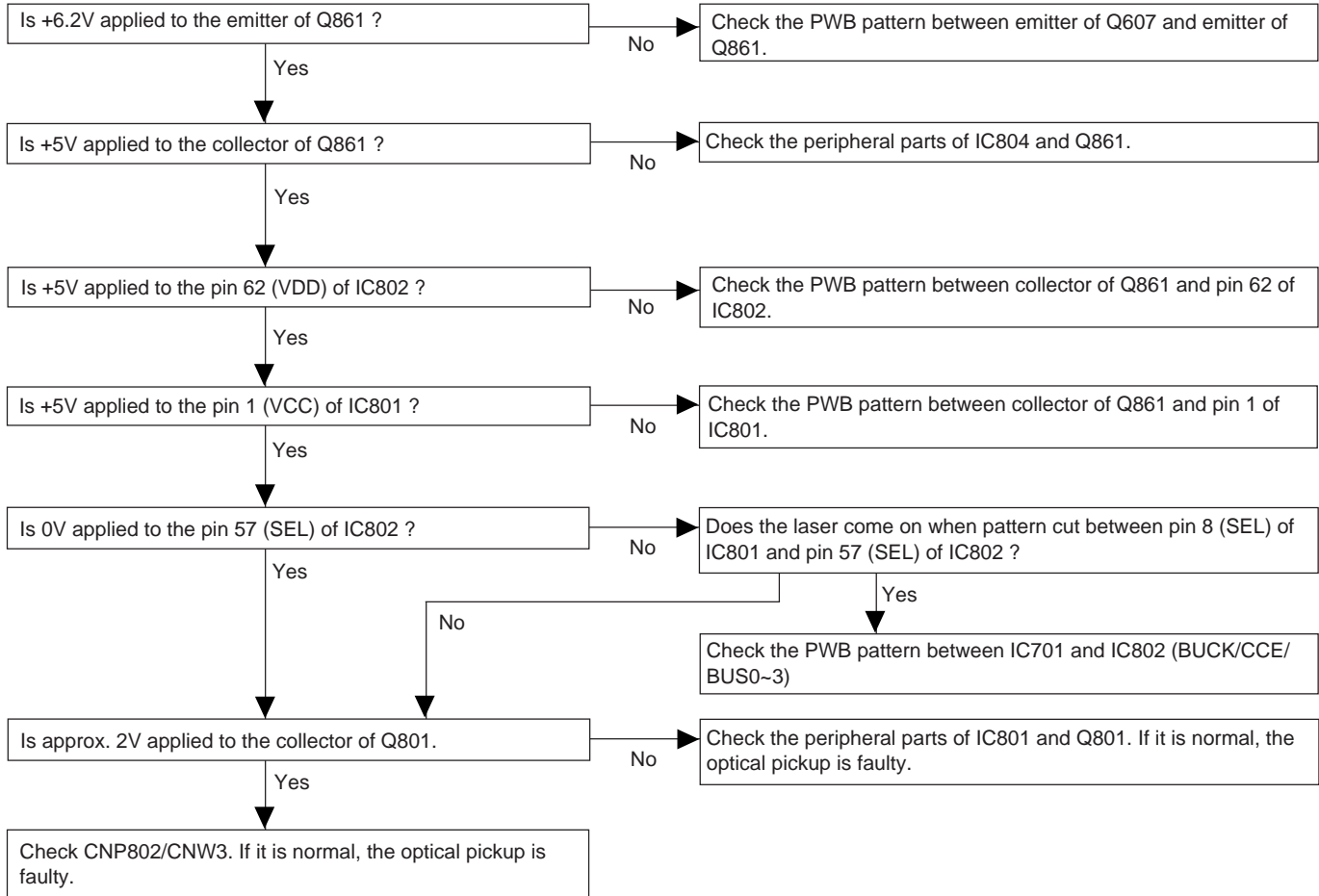
- The CD lens cleaner should be effective for 30 - 50 operations, however if the brushes become worn out earlier then please replace the cleaner disc.
 - If the CD cleaner brushes become very wet then wipe off any excess fluid with a soft cloth.
 - Do not drink the cleaner fluid or allow it to come in contact with the eyes. In the event of this happening then drink and / or rinse with clean water and seek medical advice.
 - The CD cleaner disc must not be used on car CD player or on computer CD ROM drives.
- All rights reserved. Unauthorized duplicating, broadcasting and renting product is prohibited by law.



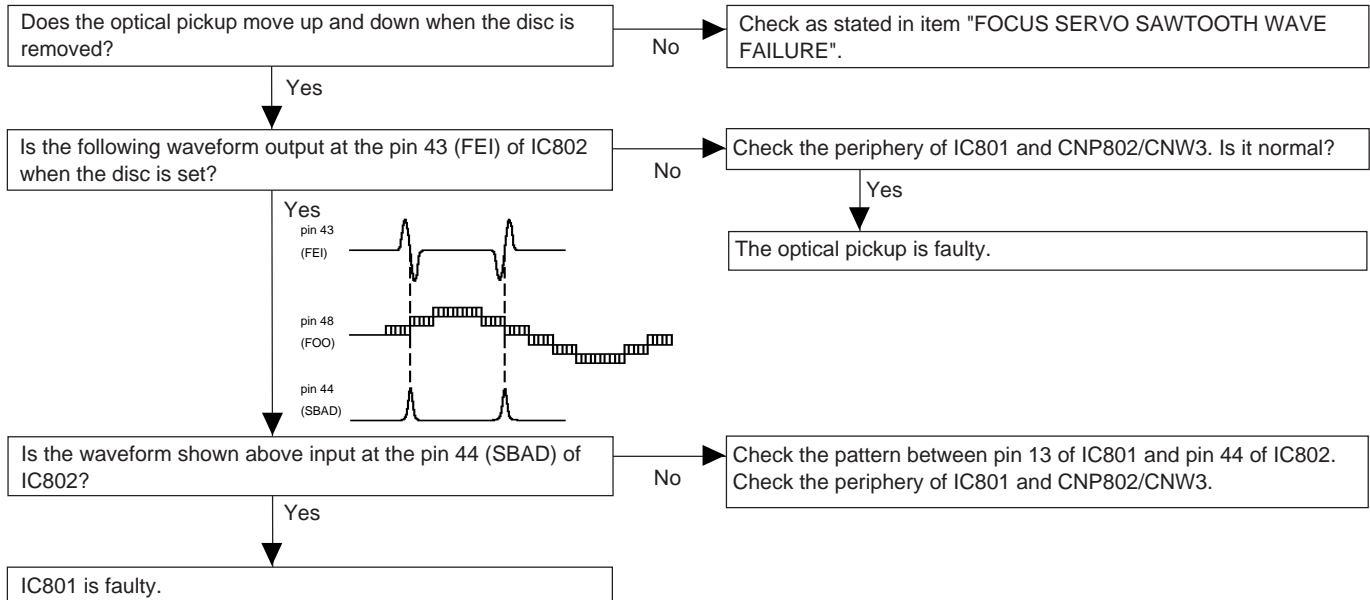


XL-3000V

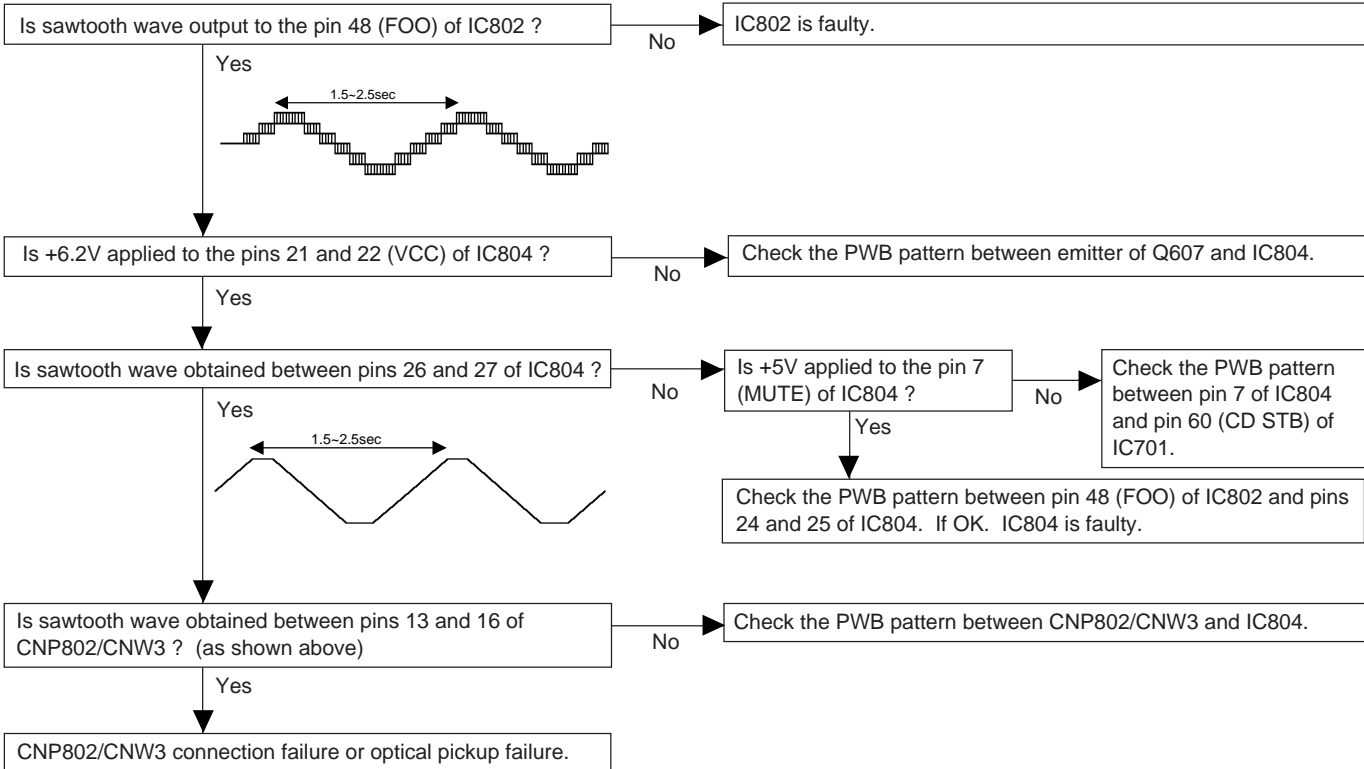
• Laser failure.



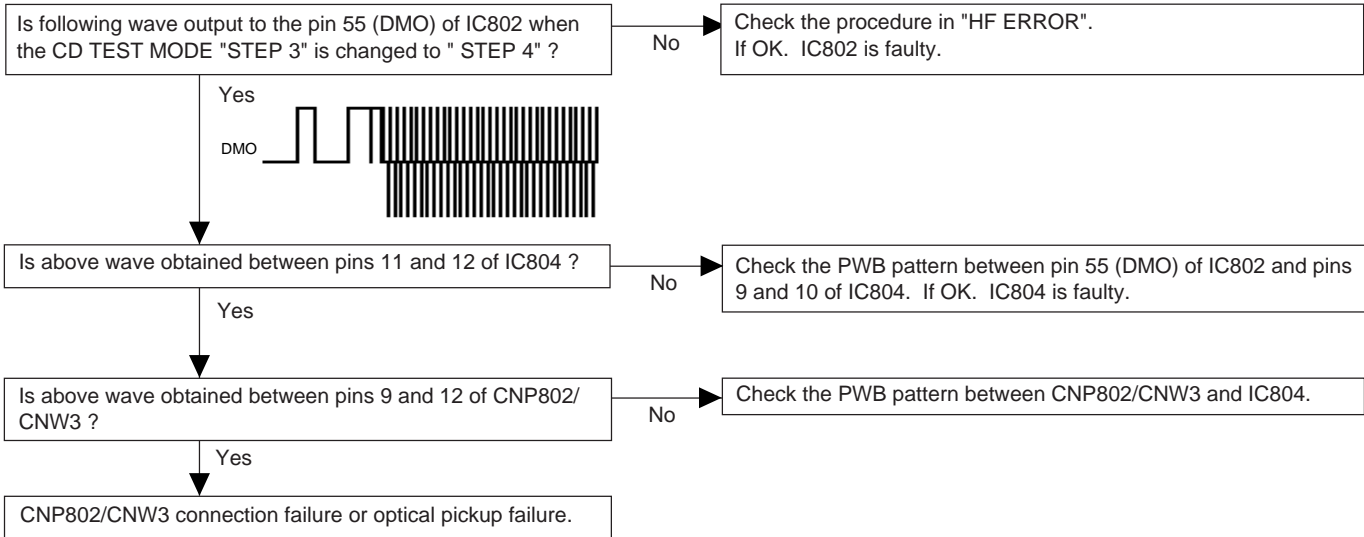
• Focus failure.



• Focus servo sawtooth wave failure.



• Spindle motor clv servo failure.

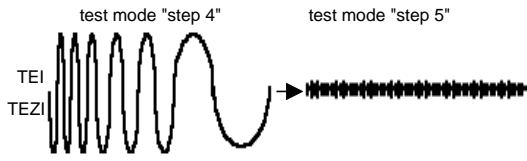


XL-3000V

• HF error.

Is output (tracking error signal) obtained at the pins 46 (TEI) and 47 (TEZI) of IC802 the CD TEST MODE "STEP 4" is changed to "STEP 5"?

Yes



No

Is output obtained at the pins 3 and 8 of CNP802/CNW3.

No

Optical pickup failure.

Yes

Check the periphery of IC801.
Check the PWB pattern between pin 12 (TEO) of IC801 and pins 46 and 47 of IC802.
Is it normal ?

No

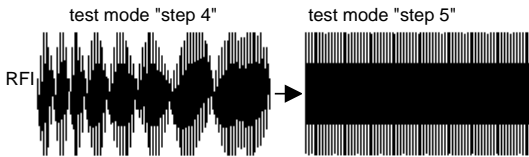
IC801 is faulty.

Yes

Check the PWB pattern between pin 49 (TRO) of IC802 and pin 19 of IC804.
Check the periphery of IC804 and CNP802/CNW3.
If OK. Optical pickup failure.

Is output (HF signal) obtained at the pin 38 (RFI) of IC802 when the CD TEST MODE "STEP 4" is changed to "STEP 5"?

Yes



No

Is output obtained at the pins 4 and 5,6 of CNP802/CNW3.

No

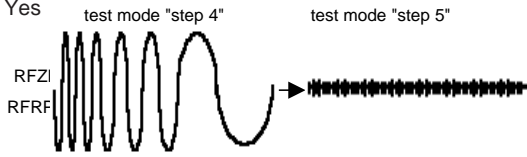
Optical pickup failure.

Yes

Check the periphery of IC801.
Check the PWB pattern between pin 19 (RFGO) of IC801 and pin 38 (RFI) of IC802.
If OK. IC801 is faulty

Is output (HF signal) obtained at the pins 41 (RFZI) and 42 (RFRP) of IC802 when the CD TEST MODE "STEP 4" is changed to "STEP 5"?

Yes



No

Check the periphery of IC801.
Check the PWB pattern between pin 17 (RFRP) of IC801 and pins 41 (RFZI) and 42 (RFRP) of IC802.
If OK. IC801 is faulty.

Is the following wave output to the pin 55 (DMO) of IC802 when the CD TEST MODE "STEP 4" or "STEP 5"?

Yes



No

Check the periphery pins 28~32 of IC802.
If OK. IC802 failure.

Normal.

• No sound.

Is the wave output at pins 45~48 on IC14V?

No

Check the soldering and parts of IC14V.

Yes

Is the wave output at pins 1 and 7 on IC11V?

No

Check the soldering and parts of IC11V.

Yes

Is the wave output at pins 14 and 17 on IC401?

No

Check the connection between IC11V and IC401.

Yes

Check areas between pins 5 and 26 on IC401 and IC601.

• Track search failure

Does the sled motor run in FF/REW state when the SERVO TEST MODE "STEP1" is set?

No → Check as stated in item "SLED MOTOR OPERATION FAILURE".

Yes

Is the following wave output to the pin 49 (TRO) of IC802 during track search in normal playback?

No → IC802 failure.



Yes

Is the following wave output to the pins 12 (TEO) of IC801 during track search in normal playback?

No → Check the PWB pattern between pin 49 (TRO) of IC802 and pin 19 of IC804.
Check the PWB pattern between pins 17 and 18 of IC804 and Optical pickup.
If OK. Optical pickup failure.



Yes

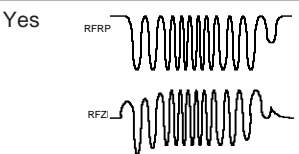
Is the above wave output to the pins 46 (TEI) and 47 (TEZI) of IC802 during track search in normal playback?

No → Check the PWB pattern between pin 12 (TEO) of IC801 and pins 46 and 47 of IC802. If OK. IC801 failure.

Yes

Is the following wave output to the pin 41 (RFZI) and 42 (RFRP) of IC802 during track search in normal playback?

No → Check the PWB pattern between pin 17 (RFO) and 18 (RFIS), 19 (RFRP) of IC801 and pins 41 and 42 of IC802. If OK. IC801 failure.



Yes

Normal.

• Sled motor operation failure.

Is following sled feed signal output the pin 53 (FMO) of IC802 when FF ►►►/REW ◄◄◄ key is pressed after the CD TEST MODE "STEP 1" is set?

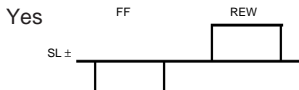
No → C802 is faulty.



Yes

Is following sled feed signal output the pins 3 and 4 of IC804 when FF ►►►/REW ◄◄◄ key is pressed after the CD TEST MODE "STEP 1" is set?

No → Check the PWB pattern between pin 53 of IC802 and pins 3 and 4 of IC804.



Yes

Is sled feed signal output the pins 1 and 2 of IC804?

No → Check the peripheral parts of IC804. If OK, IC804 is faulty.

Yes

Is sled feed voltage applied between both terminals of sled motor?

No → Check the CNW803/CNS803.

Yes

Check the CD mechanism (periphery of sled motor).
If the sled motor does not run when DC2.0V is applied to both terminals of sled motor, the sled motor is faulty.

• Sled servo failure.

Is following sled signal output the pin 53 (FMO) of IC802 during playback?

No → IC802 is faulty.



Yes

Normal.

FUNCTION TABLE OF IC

IC401 VHiLC75342M-1: Function/Volume Equalizer (LC75342M)

Pin No.	Port Name	Function
1	DI	Serial data and clock input pin for control.
2	CE	Chip enable pin. Data written into an internal latch in a timing of [H] -> [L]. Each analog switch is activated. Data transfer enabled at [H] level.
3	VSS	Ground pin.
4	TEST	Electronic volume control pin. To be set to the VSS potential.
5	LOUT	Volume + equalizer output pin.
6	LBASS2	Bass-band filter comprising capacitor and resistor connection pin.
7	LBASS1	Bass-band filter comprising capacitor and resistor connection pin.
8	LTRE	Capacitor connection pin comprising treble band filter.
9	LIN	Volume + equalizer input pin.
10	LSEL0	Input selector output pin.
11	L4	Input signal pin.
12*	L3	Input signal pin.
13	L2	Input signal pin.
14	L1	Input signal pin.
15*	NC	No CONNECT pin. To be open or connected to VSS.
16*	NC	No CONNECT pin. To be open or connected to VSS.
17	R1	Input signal pin.
18	R2	Input signal pin.
19*	R3	Input signal pin.
20	R4	Input signal pin.
21	RSEL0	Input selector output pin.
22	RIN	Volume + equalizer input pin.
23	RTRE	Capacitor connection pin comprising treble band filter.
24	RBASS1	Bass-band filter comprising capacitor and resistor connection pin.
25	RBASS2	Bass-band filter comprising capacitor and resistor connection pin.
26	ROUT	Volume + equalizer output pin.
27*	NC	No CONNECT pin. To be open or connected to VSS.
28	Vref	0.5 x VDD voltage generation block for analog ground. Capacitor of several 10 μ F to be connected between Vref and AWSS (VSS) as a counter measure against power ripple.
29	VDD	Supply pin.
30	CL	Serial data and clock input pin for control.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC401 VHiLC75342M-1: Function/Volume Equalizer (LC75342M)

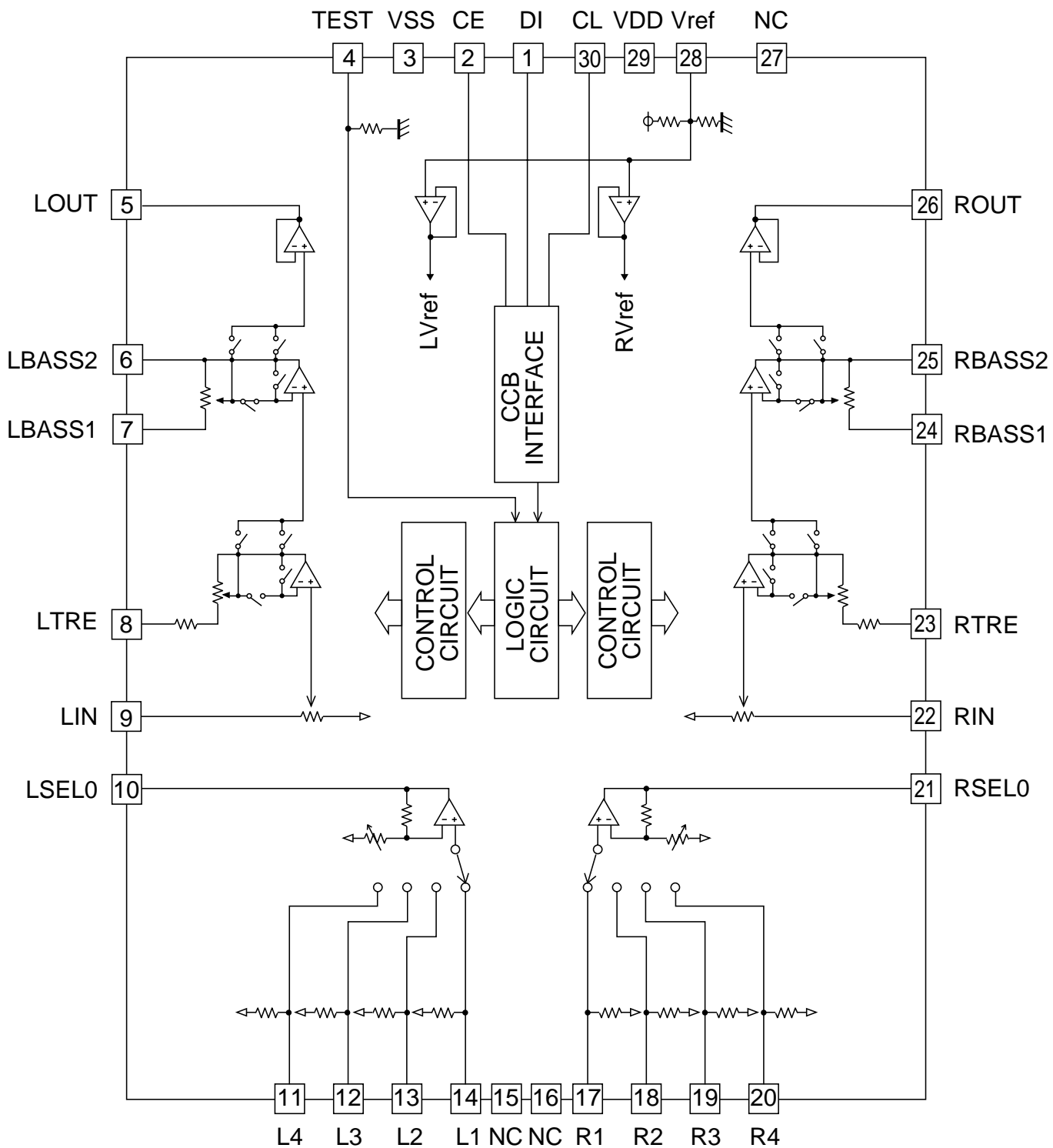


Figure 49 BLOCK DIAGRAM OF IC

XL-3000V**IC701 RH-iX0038SJZZ: System Microcomputer/FL driver (IX0038SJ) (1/2)**

Pin No.	Terminal Name	Input/Output	Function
1-4	COM3-COM0	Output	LCD common output terminal.
5-7	VLC3-VLC1	—	LCD power supply terminal.
8	VDD	Input	Microcomputer power supply +5V.
9	OSC2	Output	Oscillator ground terminal for main clock. f=8MHz
10	OSC1	Input	Oscillator ground terminal for main clock. f=8MHz
11	VSS	—	Microcomputer power supply GND.
12	XI	Input	Oscillator ground terminal for sub clock. f=32.768kHz
13	XO	Output	Oscillator ground terminal for sub clock. f=32.768kHz
14	MMOD	Input	Memory mode selection terminal.
15	VREF-	—	Power supply GND for AD converter.
16	KEY0 AN0/PA0	Input	CD lid status detection input.
17	KEY1 AN0/PA1	Input	Operation button input, Max-8 buttons.
18	KEY2 AN0/PA2	Input	Operation button input, Max-8 buttons.
19	KEY3 AN0/PA3	Input	MODEL/TUNER destination input.
20	KEY4 AN0/PA4	Input	Current detection of CD lid control motor. Used to decide the CD lid drive error to control it.
21	KEY5 AN0/PA5	Input	Fan motor auto adjustment mode selection input.
22*	KEY6 AN0/PA6	Input	
23*	KEY7 AN7/PA7	Input	Tuner signal meter (S meter) voltage input terminal.
24	VREF+	Input	Power supply for A/D converter +5V.
25	TXD SBO0/P00	Output	Data output terminal to TUNER PLL IC.
26	RXD SBI0/P01	Input	Data input from TUNER PLL IC.
27	SBT0/P02	Output	Synchronous clock output with TUNER PLL IC.
28	SBO1/P03	Output	VIDEO CD DECORDER DATA output.
29	SBI1/P04	Output	VIDEO CD DECORDER DATA input.
30	SBT1/P05	Output	VIDEO CD DECORDER CLOCK signal.
31	DK/BZER P06	Output	VIDEO CD DECORDER BUSY signal.
32	RST/P27	Input	Reset signal input.
33*	RMOUT P10	Input	CLOCK/TIMER/SLEEP button input.
34	P11	Input	Tape run/END detection input.
35	TM2IO P12	Output	CD LID output signal.
36*	TM3IO P13	Output	Recording bias oscillation frequency selection control output.
37	TM4IO P14	Input	Power (POWER) button input detection.
38	IRQ0 P20	Input	Switches to the HALT mode when changing to . "L" at power failure detection input.
39	SENS IRQ1/P21	Input	Remote control signal input.
40	IRQ2 P22	Input	VIDEO CD DECORDER STROBE signal.
41*	IRQ3 P23	Input	
42*	IRQ4 P24	Input	
43	P30	Output	SURROUND control output.
44	P31	Output	POWER IC STAND-BY terminal CONTROL.
45	P32	Output	Power mute output. "H" = MUTE ON "L" = MUTE OFF
46	LED0 WE/P50	Output	CD servo power supply circuit control output. "H" = CD power ON "L" = CD power OFF
47	LED1 RE/P51	Output	Main TRANS RELAY CONTROL. "H" = ON "L" = OFF
48*	LED2 CS/P52	Input	Data input from RDS IC.
49	LDE3/S51 A16/P53	Input	Radio stereo broadcast reception detection input. "L" = During stereo broadcast reception
50	LED4/S50 A17/P54	Input	Broadcast reception status detection input. "L" = During broadcasting signal reception
51	SEG49 P60/A0	Output	LCD backlight control signal output. "H" = Backlight ON, "L" = Backlight OFF
52	SEG48 P61/A1	Output	Amp. signal detection.
53	SEG47 P62/A2	Output	LED illumination control. "H" = ON "L" = OFF

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC801 VHiTA2109F/-1:Servo Pre Amp. (TA2109F)

Pin No.	Terminal Name	Input/Output	Function
1	VCC	—	Power voltage terminal
2	FNI	Input	Main beam amp input terminal
3	FPI	Input	Main beam amp input terminal
4	TPI	Input	Sub-beam amp input terminal
5	TNI	Input	Sub-beam amp input terminal
6	MDI	Input	Monitor photodiode amp input terminal
7	LDO	Output	Laser diode amp output terminal
8	SEL	Input	Laser diode control signal input and APC circuit ON/OFF signal input terminal
9	TEB	Input	Tracking error balance adjustment signal input terminal To be controlled by 3-value PWM signal. (PWM carrier = 88.2 kHz)
10	2VRO	Output	Standard voltage (2VR) output terminal. When Vcc = 5V, 2VR = 4.2V.
11	TEN	Input	Tracking error signal generation amp reversed phase input terminal
12	TEO	Output	Tracking error signal generation amp output terminal
13	SBAD	Output	Sub-beam addition signal output terminal
14	FEO	Output	Focus error signal generation amp output terminal
15	FEN	Input	Focus error signal generation amp reversed phase input terminal
16	VRO	Output	Standard voltage (VR) output terminal. When Vcc = 5V, VR = 2.1V.
17	RFRP	Output	Track count signal generation amp output terminal
18	RFIS	Input	RFRP detection circuit input terminal
19	RFGO	Output	RF signal output terminal
20	RFGC	Input	RF amplitude adjustment control signal input terminal The amplitude of RF signal can be controlled by using the 3-value PWM signal (PWM carrier = 88.2 kHz) which is output from the RFGC terminal of TC9432F.
21	AGCI	Input	RF signal amplitude adjustment amp input terminal
22	RFO	Output	RF signal generation amp output terminal
23	GND	—	GND terminal
24	RFN	Input	RF reversed phase input terminal

IC801 VHiTA2109F/-1:Servo Pre Amp. (TA2109F)

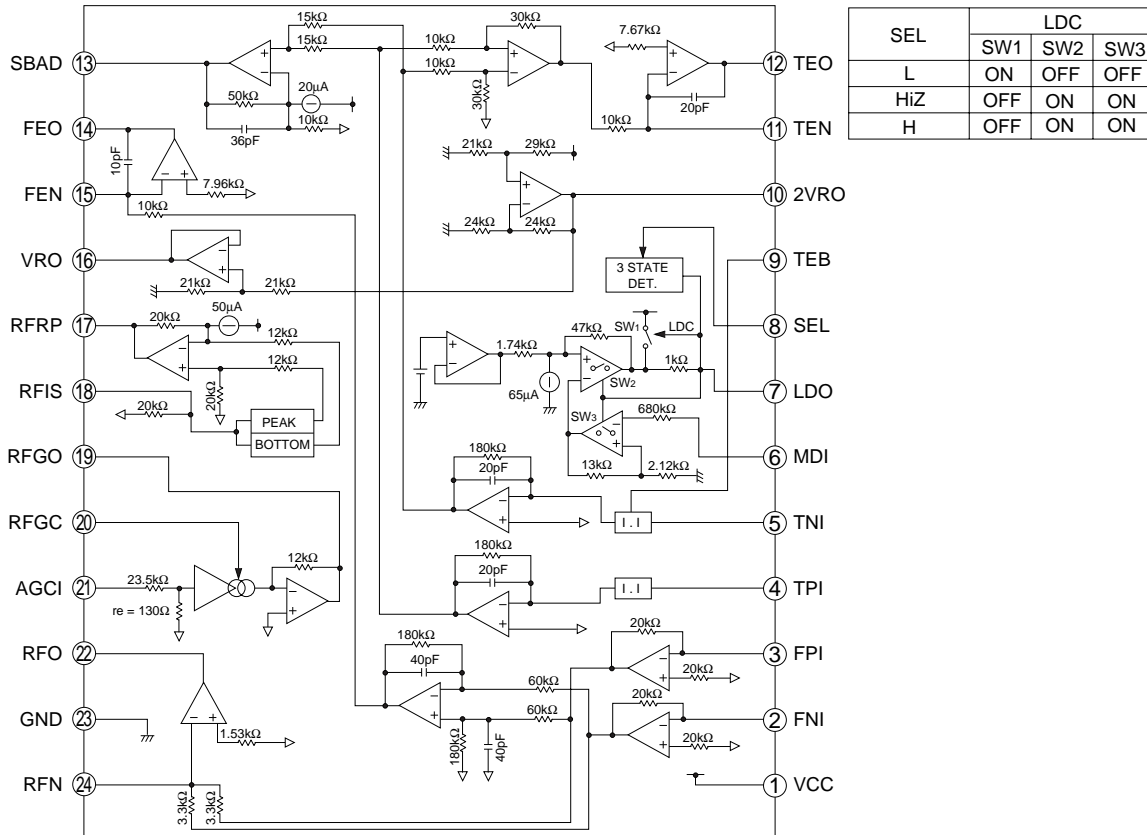


Figure 52 BLOCK DIAGRAM OF IC

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F) (1/3)

Pin No.	Port Name	Input/Output	Function															
1*	TEST0	Input	Test mode terminal. To be opened usually.															
2*	/HSO	Output	Playback speed mode flag output terminal. <table border="1"> <thead> <tr> <th>/UHSO</th> <th>/HSO</th> <th>Playback speed</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>H</td> <td>x1 speed playback</td> </tr> <tr> <td>H</td> <td>L</td> <td>x2 speed playback</td> </tr> <tr> <td>L</td> <td>H</td> <td>x4 speed playback</td> </tr> <tr> <td>L</td> <td>L</td> <td>—</td> </tr> </tbody> </table>	/UHSO	/HSO	Playback speed	H	H	x1 speed playback	H	L	x2 speed playback	L	H	x4 speed playback	L	L	—
/UHSO	/HSO	Playback speed																
H	H	x1 speed playback																
H	L	x2 speed playback																
L	H	x4 speed playback																
L	L	—																
3*	/UHSO	Output																
4*	EMPH	Output	Sub-code Q data emphasis flag output terminal. "H": Emphasis ON "L": Emphasis OFF The output polarity can be inverted by command.															
5	LRCK	Output	Channel clock (44.1 kHz) output terminal. "L": L channel "H": R channel The output polarity can be inverted by command.															
6	VSS	—	Digital ground terminal.															
7	BCK	Output	Bit clock (1.4122 MHz) output terminal.															
8	AOUT	Output	Audio data output terminal.															
9	DOUT	Output	Digital out output terminal.															
10*	MBOV	Output	Buffer memory over signal output terminal. "H": Over															
11*	IPF	Output	Correction flag output terminal. "H": When AOUT output is correction-disabled symbol in case of C2 correction output.															
12*	SBOK	Output	Sub-code Q data CRCC judgment result output terminal. "H": When judgment result is OK.															
13*	CLCK	Input/Output	Sub-code P-W data read clock output/input terminal. Selectable with command bit.															
14	VDD	Input	Digital + power terminal.															
15	VSS	—	Digital ground terminal.															
16*	DATA	Output	Sub-code P-W data output terminal.															
17*	SFSY	Output	Playback system frame sync signal output terminal.															
18*	SBSY	Output	Sub-code block sync output terminal. "H": On S1 position when the sub-code sync is detected.															
19*	SPCK	Output	Processor status signal read clock (176.4 kHz) output terminal.															
20*	SPDA	Output	Processor status signal output terminal.															
21*	COFS	Output	Correction system frame clock (7.35 kHz) output terminal.															
22*	MONIT	Output	LSI internal signal monitor terminal. It is possible to monitor the DSP internal flag and PLL system clock with the microcomputer command. Terminal for serial output of text data according to command.															
23	VDD	Input	Digital + power terminal.															
24	TESIO0	Input	Test input/output terminal. To be fixed to "L" usually. Terminal to input the text data read clock according to command.															
25	P2VREF	—	2VREF terminal for PLL system.															
26*	HSSW	Output	VREF voltage in case of x2 speed/x4 speed.															
27*	ZDET	Output	1-bit DAC zero detection flag output terminal.															
28	PDO	Output	Terminal to output the phase difference between EFM signal and PLCK signal.															
29*	TMAXS	Output	TMAX detection result output terminal. To be selected with command bit TMPS.															
30	TMAX	Output	TMAX detection result output terminal. To be selected with command bit TMPS. <table border="1"> <thead> <tr> <th>TMAX detection result</th> <th>TMAX output</th> </tr> </thead> <tbody> <tr> <td>Longer than specific period</td> <td>"P2VREF"</td> </tr> <tr> <td>Shorter than specific period</td> <td>"VSS"</td> </tr> <tr> <td>Within specific period</td> <td>"HIZ"</td> </tr> </tbody> </table>	TMAX detection result	TMAX output	Longer than specific period	"P2VREF"	Shorter than specific period	"VSS"	Within specific period	"HIZ"							
TMAX detection result	TMAX output																	
Longer than specific period	"P2VREF"																	
Shorter than specific period	"VSS"																	
Within specific period	"HIZ"																	
31	LPFN	Input	Low-pass filter amp inverted input terminal.															
32	LPFO	Output	Low-pass filter amp output terminal.															
33	PVREF	Input	VREF terminal for PLL system.															
34	VCOREF	Input	VCO center frequency standard level terminal. To be fixed to PVref usually.															
35	VCOF	Output	VCO filter terminal.															
36	AVSS	—	Analog system ground terminal.															
37	SLCO	Output	Data slice level generation DAC output terminal.															
38	RFI	Input	RF signal input terminal.															

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F) (2/3)

Pin No.	Port Name	Input/Output	Function
39	AVDD	Input	Analog system power terminal.
40	RFCT	Input	RFRP signal center level input terminal.
41	RFZI	Input	RFRP zero cross input terminal.
42	RFIP	Input	RF ripple signal input terminal.
43	FEI	Input	Focus error signal input terminal.
44	SBAD	Input	Sub-beam addition signal input terminal.
45	TSIN	Input	Test input terminal. To be fixed to Vref usually.
46	TEI	Input	Tacking error input terminal. (Tracking servo ON: Taking-in).
47	TEZI	Input	Tracking error, zero cross input terminal.
48	FOO	Output	Focus equalizer output terminal.
49	TRO	Output	Tracking equalizer output terminal.
50	VREF	Input	Analog standard power terminal.
51	RFGC	Output	RF amplitude adjustment control signal output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
52	TEBC	Output	Tracking balance control signal output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
53	FMO	Output	Feed equalizer output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
54*	FVO	Output	Speed error signal or feed search EQ output terminal. 3-value PWM signal is output. (PWM carrier = 88.2 kHz)
55	DMO	Output	Disc equalizer output terminal. 3-value PWM signal is output. (PWM carrier = DSP system 88.2 kHz, sync with PXO)
56	2VREF	Input	Analog standard power terminal (2xVREF)
57	SEL	Output	APC circuit ON/OFF signal output terminal. When laser is ON and UHS = L, "Hi-Z". When UHS = H, "H" output is obtained.
58*	FLGA	Output	Internal signal monitor external flag output terminal. TEZC, FOON, FOK and RFZC signals can be selected with command.
59*	FLGB	Output	Internal signal monitor external flag output terminal. DFCT, FOON, FMON and RFZC signals can be selected with command.
60*	FLGC	Output	Internal signal monitor external flag output terminal. TRON, TRSR, FOK, and SRCH signals can be selected with command.
61*	FLGD	Output	Internal signal monitor external flag output terminal. TRON, DMON, HYS and SHC signals can be selected with command.
62	VDD	Input	Digital + power terminal.
63	VSS	—	Digital ground terminal.
64*	IO0	Input/Output	General-use I/O port. The input port and output port can be selected with command. In case of input port the terminal state (H/L) can be read with the read command. In case of output port the terminal state (H/L/HiZ) can be controlled with command.
65*	IO1		
66*	IO2		
67*	IO3		
68*	/DMOUT	Input	Terminal to set the mode to output 2-value PWM of feed equalizer from IO0,1 terminal and 2-value PWM of disc equalizer from IO2,3 terminal. "L" active
69*	/CKSE	Input	To be opened usually.
70*	/DACT	Input	DAC test mode terminal. To be opened usually.
71	TESIN	Input	Test input terminal (externally provided VCO clock input terminal). To be fixed to "L" usually.
72	TESIO1	Input	Test input/output terminal. To be fixed to "L" usually.
73	VSS	—	Digital ground terminal.
74	PXI	Input	DSP system clock oscillation circuit input terminal. To be fixed to "L" usually.
75*	PXO	Output	DSP system clock oscillation circuit output terminal.
76	VDD	Input	Digital + power terminal.
77	XVSS	—	System clock oscillation circuit ground terminal.
78	XI	Input	System clock oscillation input terminal.
79	XO	Output	System clock oscillation circuit output terminal.
80	XVDD	Input	System clock oscillation circuit + power terminal.
81	DVSR	Input	R channel D/A converting section power terminal.
82*	RO	Output	R channel data forward rotation output terminal.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F) (3/3)

Pin No.	Port Name	Input/Output	Function
83	DVDD	Input	D/A converting section power terminal.
84	DVR	Input	Reference voltage terminal.
85*	LO	Output	L channel data forward rotation output terminal.
86	DVSL	Input	L channel D/A converting section power terminal.
87*	TEST1	Input	Test mode terminal. To be opened usually.
88*	TEST2	Input	Test mode terminal. To be opened usually.
89*	TEST3	Input	Test mode terminal. To be opened usually.
90-93	BUS0-BUS3	Input/Output	Microcomputer interface data input/output terminal.
94	VDD	Input	Digital + power terminal.
95	VSS	—	Digital ground terminal.
96	BUCK	Input	Microcomputer interface clock input terminal.
97	/CCE	Input	Microcomputer interface chip enable signal input terminal. "L": BUS0 to 3 is active.
98*	TEST4	Input	Test mode terminal. To be opened usually.
99*	/TSMOD	Input	Local test mode selection terminal.
100	/RST	Input	Reset signal input terminal. "L": Reset.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 VHiTC9462F/-1: Servo/Signal Control (TC9462F)

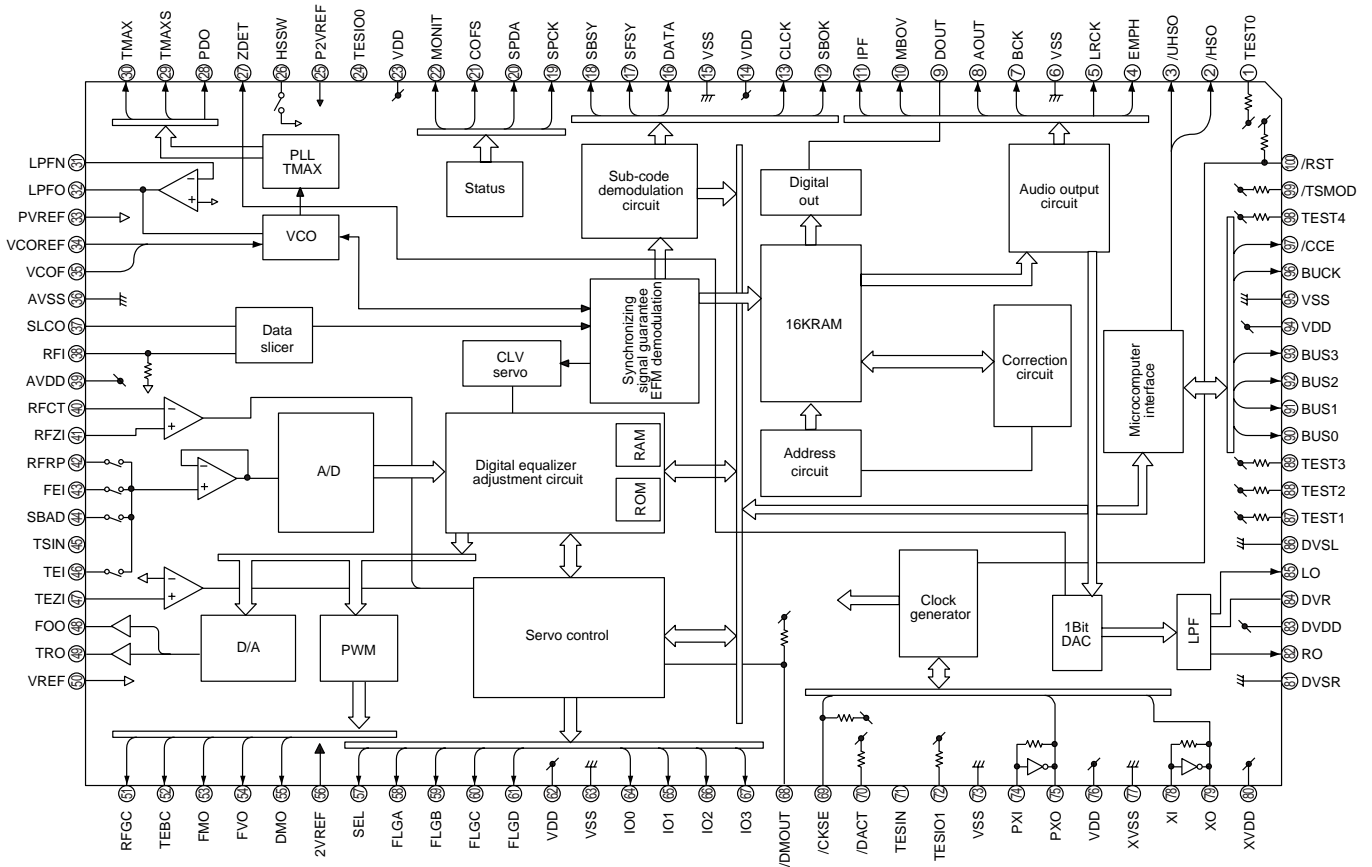


Figure 55 BLOCK DIAGRAM OF IC

IC804 VHiMM1469XH-1: Focus/Tracking/Spin/Sled Driver (MM1469XH)

Pin No.	Port Name	Function
1	CH1-OUT-A	Driver CH1 negative output
2	CH1-OUT-B	Driver CH1 positive output
3	CH1-IN-A	Driver CH1 input
4	CH1-IN-B	Driver CH1 input, gain adjustment pin
5	Tr-B	Connect to external transistor base
6	VREG-OUT	Constant voltage output, connects to external transistor collector
7	MUTE	Driver mute control input
8	GND	GND
9	CH2-IN-B	Driver CH2 input, gain adjustment pin
10	CH2-IN-A	Driver CH2 input
11	CH2-OUT-B	Driver CH2 positive output
12	CH2-OUT-A	Driver CH2 negative output
13	Substrate GND	Substrate GND
14*	OP-OUT	Operational amplifier output
15*	OP-IN(-)	Operational amplifier input, negative
16*	OP-IN(+)	Operational amplifier input, positive
17	CH3-OUT-A	Driver CH3 negative output
18	CH3-OUT-B	Driver CH3 positive output
19	CH3-IN-A	Driver CH3 input
20*	CH3-IN-B	Driver CH3 input, gain adjustment pin
21	Vcc	Vcc
22	Vcc	Vcc
23	BIAS-IN	Bias amplifier input
24	CH4-IN-B	Driver CH4 input, gain adjustment pin
25	CH4-IN-A	Driver CH4 input
26	CH4-OUT-B	Driver CH4 positive output
27	CH4-OUT-A	Driver CH4 negative output
28	Substrate GND	Substrate GND

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside. GND (lowest potential) is connected to the frame of pin center.

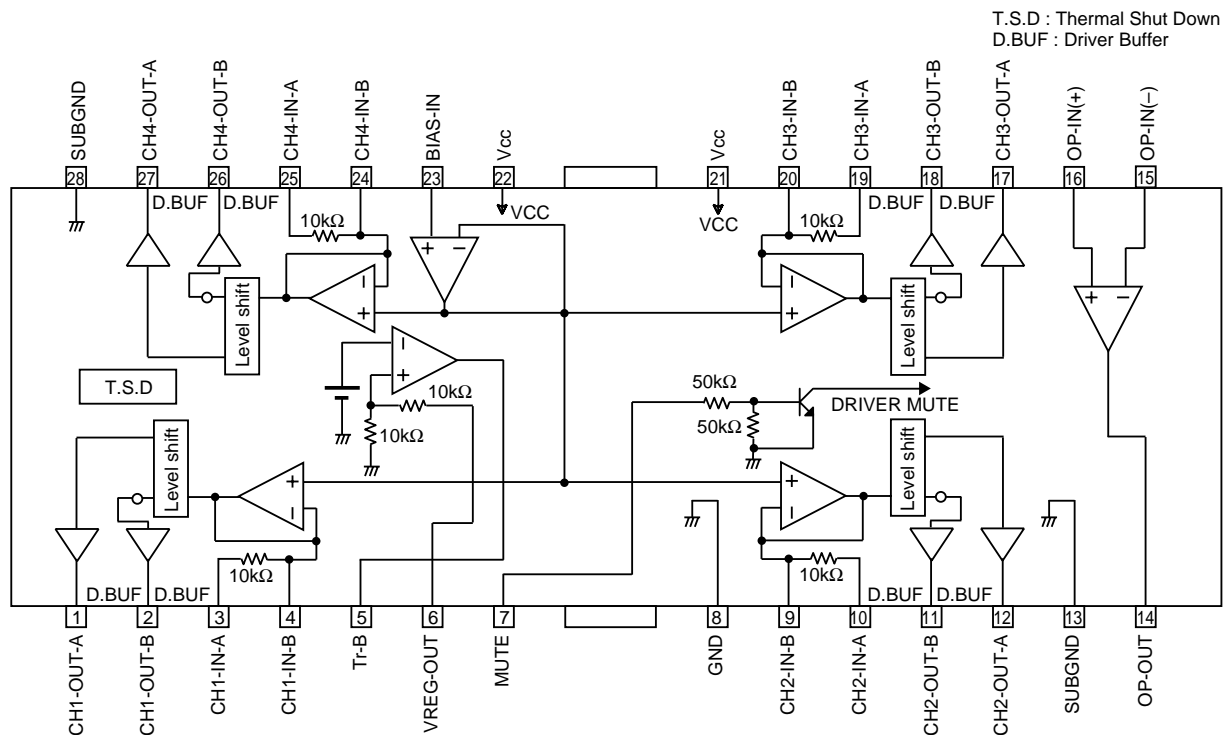


Figure 56 BLOCK DIAGRAM OF IC

IC14V VHiES3883F/-1: Video CD Encoder (ES3883F) (1/2)

Pin No.	Terminal Name	Input/Output	Function
1	VSS	Input	Ground.
2*-4*	NC	—	No connect. Do not connect to these pins.
5	VCC	Input	Voltage supply, 5V.
6	DSC_CLK	Input	Clock for programming to access internal registers.
7	AUX0	Input/Output	Servo Forward Control pin.
8	DSC_D0	Input/Output	Data for programming to access internal registers.
9	AUX1	Input/Output	Servo Reverse Control pin.
10	DSC_STB	Input	Strobe for programming to access internal registers.
11	AUX2	Input/Output	Servo LDON or Control pin.
12*	DCLK/EXT_CLK	Output	Dual-purpose pin. DCLK is the MPEG decoder clock.
		Input	EXT_CLK is the external clock. EXT_CLK is an input during bypass PLL mode.
13	RESET_B	Input	Video reset (active low).
14	AUX07	Input/Output	Servo BRKM/Sense or Control pin/VFD_DI.
15*	MUTE	Output	Audio mute.
16	VCC	Input	Voltage supply, 5V.
17	MCLK	Input	Audio master clock.
18	AUX8	Input/Output	Servo Mute/Open or Control pin/VFD_CLK.
19	TWS/SPLL_OUT	Input	Dual-purpose pin. TWS is the transmit audio frame sync.
		Output	SPLL_OUT is the select PLL output.
20*	AUX09	Input/Output	Servo SQS0 or Control pin.
21	TSD	Input	Transmit audio data input.
22	TBCK	Input	Transmit audio bit clock.
23	RWS/SEL_PLL1	Output	Dual-purpose pin. RWS is the receive audio frame sync.
23	RWS/SEL_PLL1	Input	Pins SEL_PLL [1:0] select the PLL clock frequency for DCLK output. SEL_PLL1 SEL_PLL0 DCLK 0 0 Bypass PLL (Input Mode) 0 1 27MHz (Output Mode) 1 0 32.4MHz (Output Mode) 1 1 40.5MHz (Output Mode)
24	RSTOUT_B	Output	Reset output (active low).
25, 26	VSS	Input	Ground.
27*	NC (SQCK)	—	No connect. Do not connect to these pins.
28*	NC (SQSO)	—	No connect. Do not connect to these pins.
29*, 30*	NC	—	No connect. Do not connect to these pins.
31	VSS	Input	Ground.
32	VCC	Input	Voltage supply, 5V.
33	RSD/SEL_PLL0	Output	Dual-purpose pin. RSD is the receive audio data input.
33	RSD/SEL_PLL0	Input	SEL_PLL0 along with SEL_PLL1 select the PLL clock frequency for the DCLK output. See the table for pin number 23.
34	AUX10	Input/Output	Servo SQCK or Control pin.
35	AUX11	Input/Output	3880 IRQ or Interrupt Output or Control pin.
36*	AUX12	Input/Output	CD C2PO or Interrupt or Control pins.
37	RBCK/SER_IN	Output	Dual purpose pin. RBCK is the receive audio bit clock.
		Input	SER_IN is serial input DSC mode. 0 = Parallel DSC mode. 1 = Serial DSC mode.
38	AUX13	Input/Output	Serial Interrupt/CD-Mute or Control pin.
39	AUX14	Input/Output	Servo SCOR(S0S1) or Interrupt Input or Control pin.
40	AUX15	Input/Output	Interrupt Input or Control pin.
41	VSSA	Input	Audio Analog ground.
42	VCM	Input	ADC Common Mode Reference (CMR) buffer output. CMR is approximately 2.25V. Bypass to analog ground with 47 μ F electrolytic in parallel with 0.1 μ F.
43	VREFP	Input	DAC and ADC maximum reference. Bypass to VCMR with 10 μ F in parallel with 0.1 μ F.
44	VCCAA	Input	Analog VCC, 5V.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

XL-3000V**IC14V VHiES3883F/-1: Video CD Encoder (ES3883F) (2/2)**

Pin No.	Terminal Name	Input/Output	Function
45	AOR +	Output	Right channel output.
46	AOR -	Output	Right channel output.
47	AOL -	Output	Left channel output.
48	AOL +	Output	Left channel output.
49*	MIC1	Input	Microphone input 1.
50*	MIC2	Input	Microphone input 2.
51	VSSAA	Input	Audio Analog ground.
52	VREF	Input	Internal resistor divider generates Common Mode Reference (CMR) voltage. Bypass to analog ground with 0.1 μ F.
53	VREFM	Input	DAC and ADC minimum reference. Bypass to VCMR with 10 μ F in parallel with 0.1 μ F.
54	RSET	Input	Full scale DAC current adjustment.
55	COMP	Input	Compensation pin.
56, 57	VSSAV	Input	Video Analog ground.
58*	CDAC	Output	Modulated chrominance output.
59, 60	VCCAV	Input	Video VCC, 5V.
61*	YDAC	Output	Y luminance data bus for screen video port.
62, 63	VSSAV	Input	Video Analog ground.
64	VDAC	Output	Composite video output.
65	ACAP	Input	Audio CAP.
66	VCC	Input	Voltage supply, 5V.
67*	AUX6	Input/Output	Servo XLAT or Control pin/VFD_DO.
68*	AUX5	Input/Output	Servo Data or Control pin.
69	AUX4	Input/Output	Servo CCW/Close or Control pin.
70	AUX3	Input/Output	Servo CW/Limit or Control pin.
71	XOUT	Output	Crystal output.
72	VSS	Input	Ground.
73	VCC	Input	Voltage supply, 5V.
74	XIN	Input	27 MHz crystal input.
75	VSS	Input	Ground.
76*	NC	—	No connect. Do not connect to these pins.
77	VSS	Input	Ground.
78	VCC	Input	Voltage supply, 5V.
79	PCLK	Input/Output	13.5 MHz pixel clock.
80	2XPCLK	Input/Output	27 MHz (2 times pixel clock).
81	DSC_D7	Input/Output	Data for programming to access internal registers.
82	HSYN_B	Output	Horizontal sync (active low).
83	DSC_D6	Input/Output	Data for programming to access internal registers.
84	VSYN_B	Output	Vertical sync (active low).
85	DSC_D5	Input/Output	Data for programming to access internal registers.
86-89	YUV7-YUV4	Input	YUV data bus for screen video port.
90	VCC	Input	Voltage supply. 5V.
91	VSS	Input	Ground.
92	YUV3	Input	YUV data bus for screen video port.
93	DSC_D4	Input/Output	Data for programming to access internal registers.
94	YUV2	Input	YUV data bus for screen video port.
95	DSC_D3	Input/Output	Data for programming to access internal registers.
96	YUV1	Input	YUV data bus for screen video port.
97	DSC_D2	Input/Output	Data for programming to access internal registers.
98	YUV0	Input	YUV data bus for screen video port.
99	DSC_D1	Input/Output	Data for programming to access internal registers.
100	VSS	Input	Ground.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

ICV14 VHiES3883F/-1 :Video CD Encoder (ES3883F)

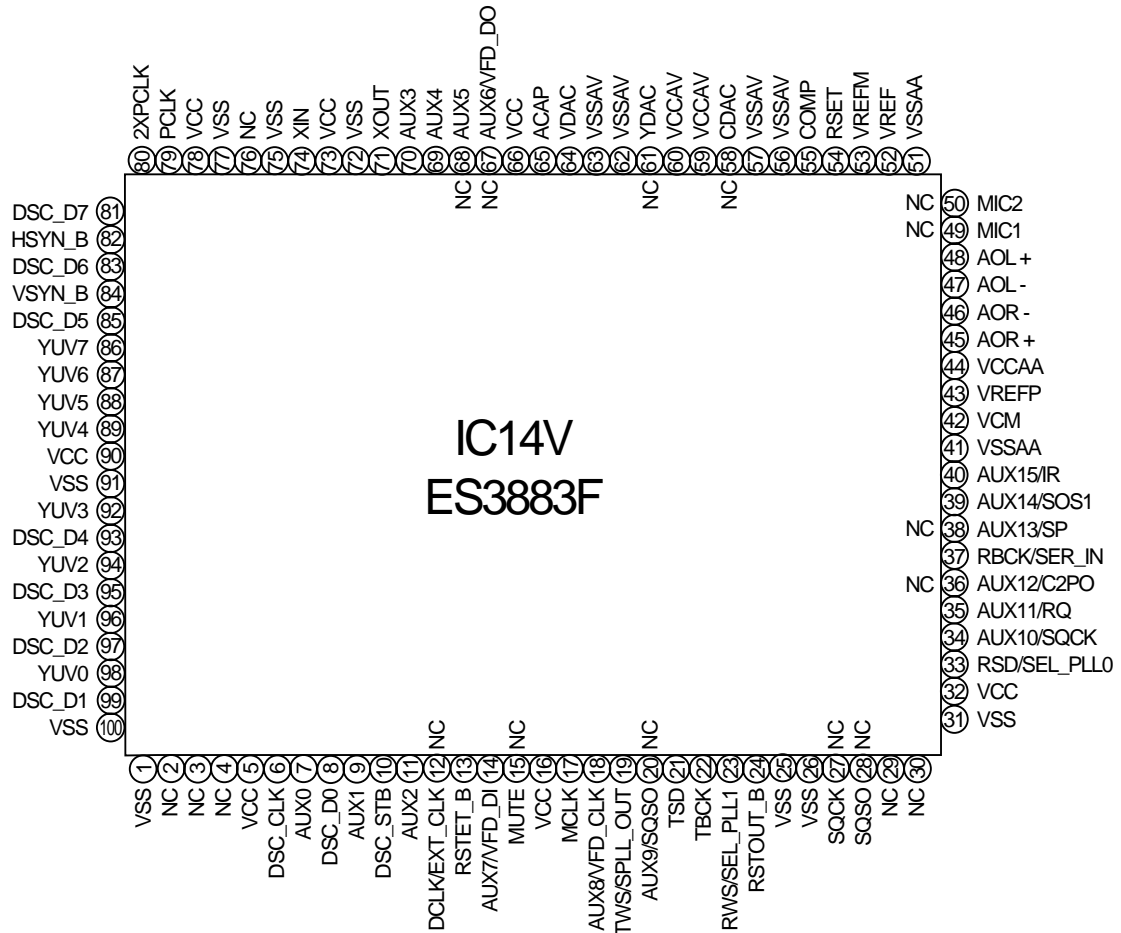


Figure 59-1 BLOCK DIAGRAM OF IC

IC16V RH-iX0025SJZZ: D-RAM 256Kx16 (IX0025SJ)

Pin No.	Port Name	Function
1	VCC	Power (5V)
2-5	DQ1-DQ4	Data input/data output
6	VCC	Power (5V)
7-10	DQ5-DQ8	Data input/data output
11*,12*	NC	Not used
13	WE	Write enable
14	RAS	Low address strobe
15*	NC	Not used
16-19	A0-A3	Address input
20	VCC	Power (5V)
21	VSS	Ground
22-26	A4-A8	Address input
27	OE	Output enable
28	UCAS	Upper column address strobe
29	LCAS	Lower column address strobe
30*	NC	Not used
31-34	DQ9-DQ12	Data input/data output
35	VSS	Ground
36-39	DQ13-DQ16	Data input/data output
40	VSS	Ground

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

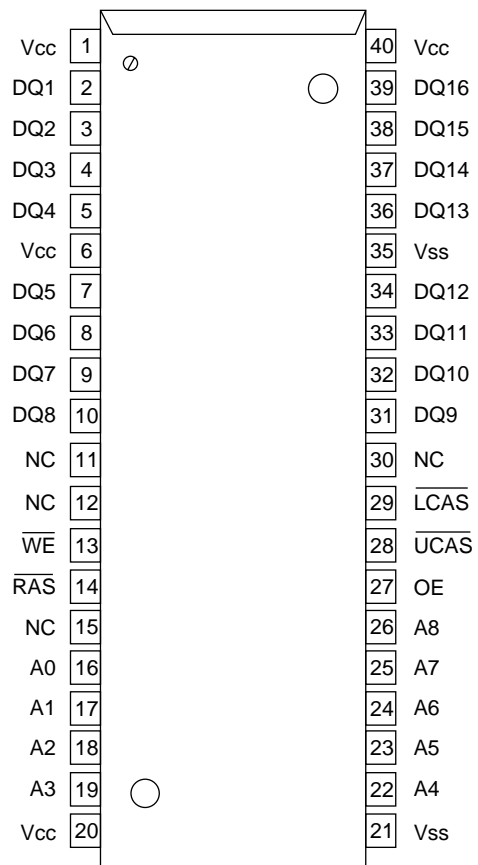


Figure 59-2 BLOCK DIAGRAM OF IC

XL-3000V

IC15V VHiES3880F/-1: Video CD Decoder (ES3880F)

Pin No.	Terminal Name	Input/Output	Function
1	VDD	Input	Voltage supply for 3.3V.
2	RAS#	Output	DRAM row address strobe (active low).
3	DWE#	Output	DRAM write enable (active low).
4-12	DA0-DA8	Output	DRAM multiplexed row and column address bus.
13-28	DBUS0-DBUS15	Input/Output	DRAM data bus.
29	RESET#	Input	Ayatem reset (active low).
30	VSS	Input	Ground.
31	VDD	Input	Voltage supply for 3.3V.
32-39	YUV0-YUV7	Output	Y is luminance, UV are chrominance data bus for screen video interface. YUV0-YUV7 for 8-bit YUV mode.
40	VSYNC	Input/Output	Vertical sync for screen video interface, programmable for rising or falling edge.
41	HSYNC	Input/Output	Horizontal sync for screen video interface, programmable for rising or falling edge.
42*	CPUCLK	Input	RISC and system clock input. CPUCLK is used only if SEL_PLL0, SEL_PLL1=00.
43	PCLK2X	Input/Output	Pixel clock; two times the actual pixel clock for screen video interface.
44	PCLK	Input/Output	Pixel clock qualifier in for screen video interface.
45,46*-49	AUX0-AUX4	Input/Output	Auxiliary control pins (AUX0 and AUX1 are open collectors).
50	VSS	Input	Ground.
51	VDD	Input	Voltage supply for 3.3V.
52-54	AUX5-AUX7	Input/Output	Auxiliary control pins.
55-62	LD0-LD7	Input/Output	RISC interface data bus.
63*	LWR#	Output	RISC interface write enable (active low).
64	LOE#	Output	RISC interface output enable (active low).
65	LCS3#	Output	RISC interface chip enable (active low).
66,67*	LCS1#, LCS0#	Output	RISC interface chip enable (active low).
68-79	LA0-LA11	Output	RISC interface address bus.
80	VSS	Input	Ground.
81	VCC	Input	Digital supply voltage for 5V.
82-87	LA12-LA17	Output	RISC interface address bus.
88	ACLK	Input/Output	Master clock for external audio DAC (8.192 MHz, 11.2896 MHz, 12.288 MHz, 16.9344 MHz and 18.432 MHz).
89	AOUT/SEL_PLL0	Output	Dual-purpose pin. AOUT is the audio interface serial data output.
		Input	Pins SEL_PLL0, SEL_PLL1 select phase-lock loop (PLL) clock frequency CPUCLK for the Visba: 00 = bypass PLL. 01 = 54 MHz PLL. 10 = 67.5 MHz PLL. 11 = 81 MHz PLL.
90	ATCLK	Input/Output	Audio transmit bit clock.
91	ATFS/SEL_PLL1	Output	Dual-purpose pin. ATFS is the audio interface transmit frame sync.
		Input	Pins SEL_PLL0, SEL_PLL1 select phase-lock loop (PLL) clock frequency CPUCLK for the Viaba. See the SEL_PLL0 pin above for the settings.
92	DA9/DOE#	Output	Dual purpose pin: DRAM output enable (active low)/DRAM multiplexed row column address bus.
93	AIN	Input	Audio interface serial data input.
94	ARCLK	Input	Audio receive bit clock.
95	ARFS	Input	Audio interface receive frame sync.
96	TDMCLK	Input	TDM interface serial clock.
97	TDMDR	Input	TDM interface serial data receive.
98	TDMFS	Input	TDM interface frame sync.
99	CAS#	Output	DRAM column address strobe bank 0 (active low).
100	VSS	Input	Ground.

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC15V VHiES3880F-1: Video CD Decoder (ES3880F)

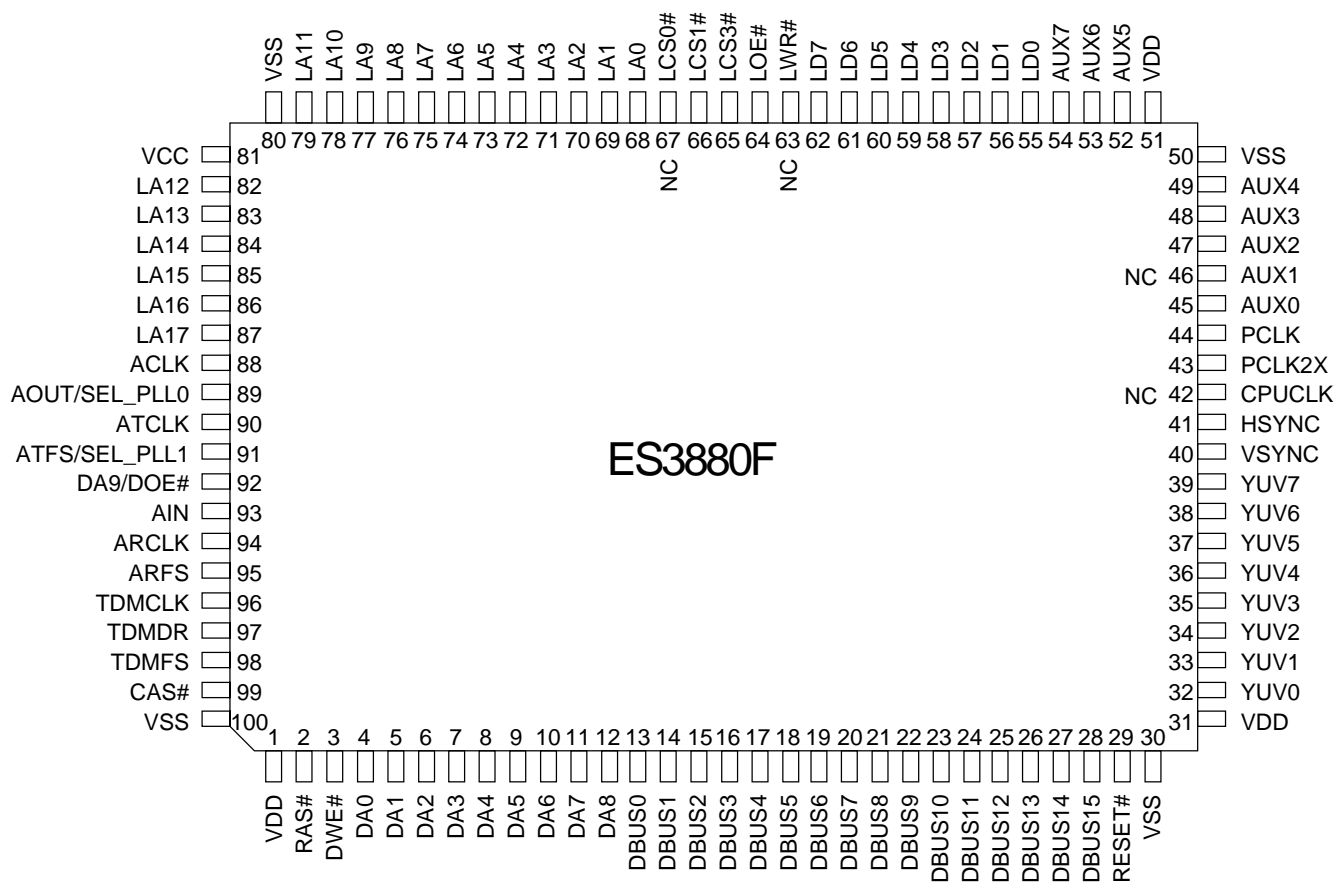
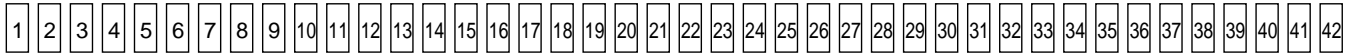
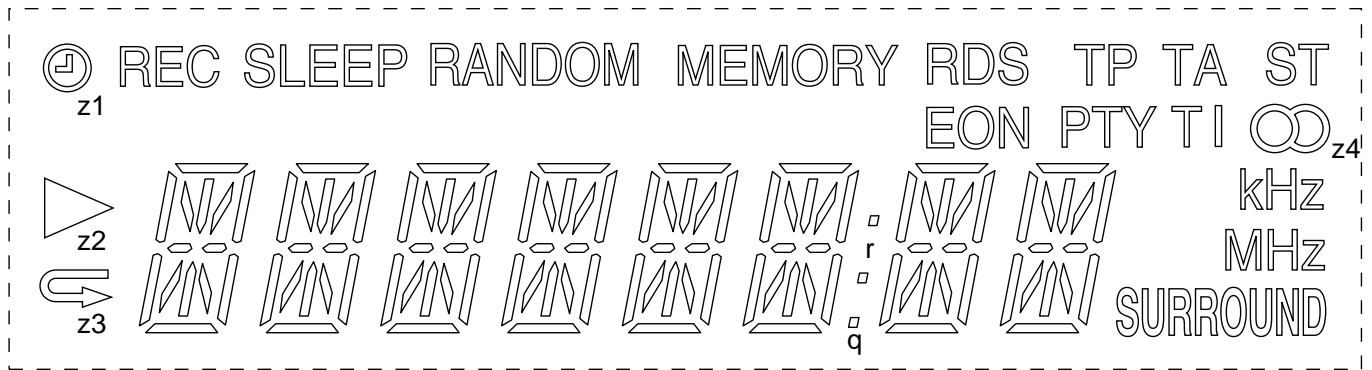


Figure 61 BLOCK DIAGRAM OF IC



PinNo	com1	com2	com3	com4
1	com1			
2		com2		
3			com3	
4				com4
5	z1	b1	c1	z2
6	h1	j1	l1	k1
7	g1	n1	m1	d1
8	a1	p1	f1	e1
9	REC	b2	c2	z3
10	h2	j2	l2	k2
11	g2	n2	m2	d2
12	a2	p2	f2	e2
13	SLEEP	b3	c3	MHz
14	h3	j3	l3	k3
15	g3	n3	m3	d3
16	a3	p3	f3	e3
17	RANDOM	b4	c4	kHz
18	h4	j4	l4	k4
19	g4	n4	m4	d4
20	a4	p4	f4	e4
21	MEMORY	b5	c5	z4

PinNo	com1	com2	com3	com4
22	h5	j5	l5	k5
23	g5	n5	m5	d5
24	a5	p5	f5	e5
25	RDS	b6	c6	ST
26	h6	j6	l6	k6
27	g6	n6	m6	d6
28	a6	p6	f6	e6
29	r	b7	c7	q
30	h7	j7	l7	k7
31	g7	n7	m7	d7
32	a7	p7	f7	e7
33	TP	b8	c8	
34	h8	j8	l8	k8
35	g8	n8	m8	d8
36	a8	p8	f8	e8
37	EON	PTY	TI	TA
38				SRS(0)
39				com4
40			com3	
41		com2		
42	com1			

Figure 62 LCD SEGMENT

SHARP PARTS GUIDE

VIDEO CD COMPACT AUDIO SYSTEM

MODEL XL-3000V

XL-3000V Video CD Compact Audio System consisting of XL-3000V (main unit) and CP-XL3000U (speaker system).

“HOW TO ORDER REPLACEMENT PARTS”

To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. No. |
| 3. PART NO. | 4. DESCRIPTION |

★ MARK: SPARE PARTS-DELIVERY SECTION

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor,
Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC Ceramic type
 VCK Ceramic type
 VCT Semiconductor type
 VC •• MF Cylindrical type (without lead wire)
 VC •• MN Cylindrical type (without lead wire)
 VC •• TV Square type (without lead wire)
 VC •• TQ Square type (without lead wire)
 VC •• CY Square type (without lead wire)
 VC •• CZ Square type (without lead wire)
 VC •••••••• J .. The 13th character represents capacity difference.
 ("J" ±5%, "K" ±10%, "M" ±20%, "N" ±30%,
 "C" ±0.25 pF, "D" ±0.5 pF, "Z" +80-20%.)


If there are no indications for the electrolytic capacitors, error is ±20%.

Resistors

VRD Carbon-film type
 VRS Carbon-film type
 VRN Metal-film type
 VR •• MF Cylindrical type (without lead wire)
 VR •• MN Cylindrical type (without lead wire)
 VR •• TV Square type (without lead wire)
 VR •• TQ Square type (without lead wire)
 VR •• CY Square type (without lead wire)
 VR •• CZ Square type (without lead wire)
 VR •••••••• J .. The 13th character represents error.
 ("J" ±5%, "F" ±1%, "D" ±0.5%.)

If there are no indications for other parts, the resistors are ±5% carbon-film type.

NOTE:

Parts marked with “” are important for maintaining the safety of the set.

Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

XL-3000V

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
INTEGRATED CIRCUITS			
IC10V	RH-IX0041SJZZ	J	ROM 256×16,IX0041SJ
IC11V	VHINJM4565M-1	J AC	Buffer Amp.,NJM4565M
IC14V	VHIES3883F/-1	J BA	Video CD Encoder,ES3883F
IC15V	VHIES3880F/-1	J BB	Video CD Decoder,ES3880F
IC16V	RH-IX0025SJZZ	J AW	D-RAM 256K×16,IX0025SJ
IC201	VHIKIA4558P-1	J AC	Surround Control,KIA4558P
IC301	VHITA7358AP-1	J AG	FM Front End,TA7358AP
IC302	VHILC72131/-1	J AP	PLL (Tuner),LC72131
IC303	VHILA1832S/-1	J AN	FM IF Det./FM Mpx./AM IF, LA1832S
IC401	VHILC75342M-1	J AN	Function/Volume Equalizer, LC75342M
IC601	VHISTK40202-1	J AW	Power AMP.,STK40202
IC681,682	VHIKIA7805API	J AF	Voltage Regulator,KIA7805API
IC701	RH-IX0038SJZZ	J	System Microcomputer/FL Driver, IX0038SJ
IC801	VHITA2109F/-1	J AL	Servo Pre Amp.,TA2109F
IC802	VHITC9462F/-1	J AZ	Servo/Signal Control,TC9462F
IC804	VHIMM1469XH-1	J AN	Focus/Tracking/Spin/Sled Driver, MM1469XH
IC805	VHITA7291S/-1	J AH	CD Lid Motor Driver,TA7291S

TRANSISTORS

Q11V	VS2SD1858R2-1	J AC	Silicon,NPN,2SD1858 R2
Q12V	VS2SC1740SR-1	J AB	Silicon,NPN,2SC1740 SR
Q101	VSKTC3200GR-1	J AC	Silicon,NPN,KTC3200 GR
Q102	VSKTA1268GR-1	J AC	Silicon,PNP,KTA1268 GR
Q103,104	VSKTC3200GR-1	J AC	Silicon,NPN,KTC3200 GR
Q201	VS2SK246GR/-1	J AB	FET,2SK246 GR
Q203	VSKRC107M/-1	J AC	Digital,NPN,KRC107 M
Q302	VS2SC535-C/-1	J AC	Silicon,NPN,2SC535 C
Q306	VS2SC535-C/-1	J AC	Silicon,NPN,2SC535 C
Q351	VSKRC104M/-1	J AC	Digital,NPN,KRC104 M
Q360	VSKTA1266GR-1	J AB	Silicon,PNP,KTA1266 GR
Q601,602	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q603	VSKTC3200GR-1	J AC	Silicon,NPN,KTC3200 GR
Q604,605	VS2SD2012Y/-1	J AF	Silicon,NPN,2SD2012 Y
Q606	VSKTC3200GR-1	J AC	Silicon,NPN,KTC3200 GR
△ Q607	VS2SD2012Y/-1	J AF	Silicon,NPN,2SD2012 Y
Q608	VSKRA102M/-1	J AC	Digital,PNP,KRA102 M
Q609	VSKRC107M/-1	J AC	Digital,NPN,KRC107 M
△ Q610	VS2SD2012Y/-1	J AF	Silicon,NPN,2SD2012 Y
Q681	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q683	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q701	VSKRC102M/-1	J AC	Digital,NPN,KRC102 M
Q702,703	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q706	VSKRC102M/-1	J AC	Digital,NPN,KRC102 M
Q707,708	VSKTA1266GR-1	J AB	Silicon,PNP,KTA1266 GR
Q709	VSKRC102M/-1	J AC	Digital,NPN,KRC102 M
Q801	VSKTA1266GR-1	J AB	Silicon,PNP,KTA1266 GR
Q802	VSKRC102M/-1	J AC	Digital,NPN,KRC102 M
Q803	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q804	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q805	VSKTA1266GR-1	J AB	Silicon,PNP,KTA1266 GR
Q806	VS2SC535-C/-1	J AC	Silicon,NPN,2SC535 C
Q807	VSKTC3200GR-1	J AC	Silicon,NPN,KTC3200 GR
Q861	VS2SB562-C/-1	J AD	Silicon,PNP,2SB562 C
Q901	VSKRC102M/-1	J AC	Digital,NPN,KRC102 M
Q902	VSKTA1266GR-1	J AB	Silicon,PNP,KTA1266 GR
Q903	VSKTC3199GR-1	J AB	Silicon,NPN,KTC3199 GR
Q904	VSKTC3200GR-1	J AC	Silicon,NPN,KTC3200 GR
Q907	VSKTA1266GR-1	J AB	Silicon,PNP,KTA1266 GR
Q908	VSKRC102M/-1	J AC	Digital,NPN,KRC102 M

DIODES

D201	VHD1N4148/-1	J AA	Silicon,1N4148
D301,302	VHD1N4148/-1	J AA	Silicon,1N4148
D305,306	VHD1N4148/-1	J AA	Silicon,1N4148
D308	VHD1N4148/-1	J AA	Silicon,1N4148
D401~403	VHD1N4004/-1	J AB	Silicon,1N4004
D411,412	VHD1N4148/-1	J AA	Silicon,1N4148
D602~604	VHD1N4148/-1	J AA	Silicon,1N4148
D605,606	VHD1N4004/-1	J AB	Silicon,1N4004
△ D651~654	VHD1N5402M/-1	J AE	Silicon,1N5402M
△ D657~660	VHD1N4004/-1	J AB	Silicon,1N4004
D681~686	VHD1N4004/-1	J AB	Silicon,1N4004
D688,689	VHD1N4004/-1	J AB	Silicon,1N4004
D720~723	VHD1N4148/-1	J AA	Silicon,1N4148

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
D801	VHPDB5306X+-1	J AR	LED,DB5306X
D802~805	VHD1N4004//-1	J AB	Silicon,1N4004
D901,902	VHD1N4004//-1	J AB	Silicon,1N4004
ZD351	VHEDZ5R1BSB-1	J AC	Zener,5.1V,DZ5.1BSB
ZD601	VHEDZ130BSA-1	J AC	Zener,13V,DZ13BSA
ZD602	VHEMTZJ9R1C-1	J AB	Zener,9.1V,MTZJ9.1C
ZD683,684	VHEMTZJ160C-1	J AB	Zener,16V,MTZJ16C
ZD701	VHEDZ3R3BSB-1	J AB	Zener,3.3V,DZ3.3BSB
ZD901	VHEDZ240BSD-1	J AB	Zener,24V,DZ24BSD
ZD902	VHEDZ5R6BSB-1	J AC	Zener,5.6V,DZ5.6BSB

FILTERS

BF301	RFILR0008AWZZ	J AE	Band Pass Filter
CF302,303	RFILF0004SJZZ	J AG	FM RF,10.7 MHz
CF351	RFILF0003AWZZ	J AK	FM IF
CF352	RFILA0003SJZZ	J AF	AM IF

TRANSFORMERS

T302	RCILA0007SJZZ	J AG	AM Tracking
T304	RCILIO005SJZZ	J AF	FM IF
T306	RCILB0009SJZZ	J AG	AM Band Coverage
T351	RCILIO004SJZZ	J AF	AM IF
△ T651	RTRNP0068SJZZ	J	Power Transformer (Main)
△ T681	RTRNP0061SJZZ	J AM	Power Transformer (Sub)

COILS

L11V	VP-XF100K0000	J AB	10 μH,Choke
L103V,104V	VP-XF3R3K0000	J AB	3.3 μH,Choke
L302	RCILR0003SJZZ	J AD	FM RF
L303	RCILB0010SJZZ	J AG	FM OSC.
L351,352	VP-DH101K0000	J AB	100 μH,Choke
L353	VP-DH102K0000	J AB	1 mH,Choke
L401	VP-DH2R2K0000	J AB	2.2 μH,Peaking
L402	VP-DHR82K0000	J AE	0.82 μH,Choke
L601,602	RCILZ0024AWZZ	J AC	3 μH,Choke
L603	VP-DH100K0000	J AB	10 μH,Choke
L702	VP-DH2R2K0000	J AB	2.2 μH,Peaking
L801	VP-DH100K0000	J AB	10 μH,Choke
L802	VP-XHR82K0000	J AC	0.82 μH
L803	VP-DH100K0000	J AB	10 μH,Choke
L806	VP-DH100K0000	J AB	10 μH,Choke

VARIABLE RESISTOR

VR351	RVR-M0999AFZZ	J AB	10 kohm (B),Semi-VR [FM Mute Level]
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VARIABLE CAPACITORS

TC100V	RTO-H1004SJZZ	J AF	Trimmer,10 pF
VD301	VHCSV348S/-1	J AK	Variable Capacitance,SVC348S
VD302,303	VHCKDV147C/-1	J AH	Variable Capacitance,KDV147C

VIBRATORS

X1V	RCRSB0002SJZZ	J AG	Crystal,27 MHz
X351	RCRM-0007SJZZ	J AG	VCO,456 kHz
X352	RCRSP0006SJZZ	J AF	Crystal,4.5 MHz
X701	RCRM-0008SJZZ	J AG	Ceramic,8 MHz
X702	RCRSP0007SJZZ	J AE	Crystal,32.768 kHz
X801	RCRSP0002SJZZ	J AL	Crystal,16.93 MHz

CAPACITORS

C101,102	RC-GZA106AF1H	J AB	10 μF,50V,Electrolytic
C101V	RC-GZV108AF0J	J AC	1000 μF,6.3V,Electrolytic
C102V,103V	RC-GZA226AF1E	J AB	22 μF,25V,Electrolytic
C103	RC-EZ0002SJZZ	J AD	10 μF,50V,Electrolytic
C104	VCCSCY1HL3R0C	J AD	3 pF,50V
C104V	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic
C105	VCKYPA1HB152K	J AA	0.0015 μF,50V
C105V	VCKYCY1EF104Z	J AA	0.1 μF,25V
C106	RC-EZ0002SJZZ	J AD	10 μF,50V,Electrolytic
C106V	VCKYCY1CF105Z	J	1 μF,16V
C107	RC-EZ0003SJZZ	J AD	100 μF,50V,Electrolytic
C108	VCKYPA1HB152K	J AA	0.0015 μF,50V
C108V	VCKYCY1EF104Z	J AA	0.1 μF,25V
C109	VCCSCY1HL3R0C	J AD	3 pF,50V
C109V	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION	NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
C110	VCKYPA1HB102K	J AA	0.001 μF,50V	C363	VCKYCY1EF223Z	J AB	0.022 μF,25V
C110V~112V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C364	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C111,112	RC-EZ0002SJZZ	J AD	10 μF,50V,Electrolytic	C365	VCKYCY1EF223Z	J AB	0.022 μF,25V
C113	VCKYPA1HF223Z	J AB	0.022 μF,50V	C366	VCKYCY1HB102K	J AA	0.001 μF,50V
C114	RC-EZ0003SJZZ	J AD	100 μF,50V,Electrolytic	C367,368	RC-EZD105AF1H	J AB	1 μF,50V,Electrolytic
C115V	RC-GZA226AF1E	J AB	22 μF,25V,Electrolytic	C369	VCCSCY1HL560J	J AD	56 pF,50V
C116	VCKYPA1HF223Z	J AB	0.022 μF,50V	C370	RC-GZA105AF1H	J AB	1 μF,50V,Electrolytic
C116V,117V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C371,372	RC-EZD105AF1H	J AB	1 μF,50V,Electrolytic
C118V	RC-GZA226AF1E	J AB	22 μF,25V,Electrolytic	C373,374	VCTYPA1CX183K	J AA	0.018 μF,16V
C119V,120V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C380	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C120	RC-GZA227AF1C	J AB	220 μF,16V,Electrolytic	C381	VCCCCY1HH120J	J AA	12 pF (CH),50V
C121V	RC-GZA226AF1E	J AB	22 μF,25V,Electrolytic	C382	VCCCCY1HH150J	J AA	15 pF (CH),50V
C122V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C383	VCKYCY1EF223Z	J AB	0.022 μF,25V
C124V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C384	VCKYCY1HB102K	J AA	0.001 μF,50V
C125,126	RC-GZW228AF1V	J AF	2200 μF,35V,Electrolytic	C385	VCKYPA1HF103Z	J AB	0.01 μF,16V
C125V	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	C386	VCKYPA1HB331K	J AA	330 pF,50V
C126V,127V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C387	VCKYCY1EF223Z	J AB	0.022 μF,25V
C129V	VCCCCY1HH270J	J AA	27 pF (CH),50V	C391	RC-GZA476AF1C	J AB	47 μF,16V,Electrolytic
C130V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C392	VCKYCY1HB102K	J AA	0.001 μF,50V
C131V	VCCCCY1HH102J	J AA	0.001 μF (CH),50V	C393	RC-GZA105AF1H	J AB	1 μF,50V,Electrolytic
C135V,136V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C394	RC-GZA476AF1C	J AB	47 μF,16V,Electrolytic
C137V~140V	RC-GZA106AF1E	J AA	10 μF,25V,Electrolytic	C395	VCKYCY1EF223Z	J AB	0.022 μF,25V
C141V~144V	VCCCCY1HH330J	J AA	33 pF (CH),50V	C396	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic
C147V,148V	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	C397	VCKYCY1EF223Z	J AB	0.022 μF,25V
C149V,150V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C398	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic
C158V	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	C399	VCKYPA1HF223Z	J AB	0.022 μF,50V
C159V,160V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C401~404	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C161V	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	C407,408	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C162V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C411	VCKYPA1HB331K	J AA	330 pF,50V
C164V	RC-GZA476AF1A	J AB	47 μF,10V,Electrolytic	C412	VCKYPA1HB331K	J AA	330 pF,50V
C165V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C413	VCKYPA1HB472K	J AB	0.0047 μF,50V
C166V	RC-GZA226AF1E	J AB	22 μF,25V,Electrolytic	C414	VCKYPA1HB221K	J AA	220 pF,50V
C167V,168V	VCCCCY1HH220J	J AA	22 pF (CH),50V	C415,416	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C169V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C417,418	RC-GZA225AF1H	J AB	2.2 μF,50V,Electrolytic
C171V,172V	RC-GZA106AF1E	J AA	10 μF,25V,Electrolytic	C419,420	VCKYCY1HB272K	J AA	0.0027 μF,50V
C183V	VCCCCY1HH220J	J AA	22 pF (CH),50V	C421~424	RC-QZA104AFYJ	J AC	0.1 μF,50V,Mylar
C184V	VCKYCY1EF104Z	J AA	0.1 μF,25V	C425,426	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C201,202	VCKYCY1HB562K	J AA	0.0056 μF,50V	C429	RC-GZA336AF1C	J AB	33 μF,16V,Electrolytic
C203,204	RC-GZA105AF1H	J AB	1 μF,50V,Electrolytic	C430	RC-GZA107AF1C	J AB	100 μF,16V,Electrolytic
C208	RC-GZA107AF1C	J AB	100 μF,16V,Electrolytic	C431~433	VCKYCY1HB221K	J AA	220 pF,50V
C209	RC-GZA476AF1C	J AB	47 μF,16V,Electrolytic	C601	VCKYCY1EF473Z	J AB	0.047 μF,25V
C211,212	VCKYCY1HB332K	J AA	0.0033 μF,50V	C602	RC-GZA476AF1C	J AB	47 μF,16V,Electrolytic
C213,214	RC-GZA475AF1H	J AB	4.7 μF,50V,Electrolytic	C603	RC-GZA336AF1C	J AB	33 μF,16V,Electrolytic
C215	RC-GZA105AF1H	J AB	1 μF,50V,Electrolytic	C613~616	VCFYFA1HA104J	J AC	0.1 μF,50V,Thin Film
C216	RC-EZD105AF1H	J AB	1 μF,50V,Electrolytic	C620	RC-GZV477AF1E	J AC	470 μF,25V,Electrolytic
C301	VCKYPA1HF123Z	J AD	0.012 μF,50V	C621	RC-GZA107AF1E	J AB	100 μF,25V,Electrolytic
C302	VCKYCY1HB102K	J AA	0.001 μF,50V	C622	VCKYPA1HF223Z	J AB	0.022 μF,50V
C303	VCKYCY1HB102K	J AA	0.001 μF,50V	C624	VCKYPA1HF223Z	J AB	0.022 μF,50V
C304	VCKYCY1EF103Z	J AA	0.01 μF,25V	C625	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C305	VCKYCY1HB472K	J AA	0.0047 μF,50V	C626	RC-GZA107AF1E	J AB	100 μF,25V,Electrolytic
C306	VCCUCY1HJ7R0D	J AB	7pF (UJ),50V	C627	VCKYPA1HF223Z	J AB	0.022 μF,50V
C307	VCKYCY1HB472K	J AA	0.0047 μF,50V	C628	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C308	VCKYCY1EF223Z	J AB	0.022 μF,25V	C629	RC-GZA475AF1E	J AB	4.7 μF,25V,Electrolytic
C309	VCKYCY1HB102K	J AA	0.001 μF,50V	C630	RC-GZW478AF1E	J AG	4700 μF,25V,Electrolytic
C310	VCKYCY1EF223Z	J AB	0.022 μF,25V	C639,640	VCKYPA1HB472K	J AB	0.0047 μF,50V
C311	VCCCCY1HH100J	J AA	10 pF (CH),50V	△ C651	VCFYFA1HA104J	J AC	0.1 μF,50V,Thin Film
C312	VCCSCY1HL330J	J AD	33 pF,50V	△ C654	VCFYFA1HA104J	J AC	0.1 μF,50V,Thin Film
C313	VCCUCY1HJ6R0D	J AB	6 pF (UJ),50V	△ C657~660	VCFYFA1HA104J	J AC	0.1 μF,50V,Thin Film
C314	VCCCCY1HH220J	J AA	22 pF (CH),50V	C665	VCFYFA1HA473J	J AB	0.047 μF,50V,Thin Film
C315	VCKYCY1HB101K	J AB	100 pF,50V	C683	RC-GZW228AF1V	J AF	2200 μF,35V,Electrolytic
C316	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic	C688	VCFYFA1HA473J	J AB	0.047 μF,50V,Thin Film
C317	VCKYCY1EF223Z	J AB	0.022 μF,25V	C689	RC-GZA474AF1H	J AA	0.47 μF,50V,Electrolytic
C318	VCCSCY1HL5R0C	J AD	5 pF,50V	C701,702	VCCCCY1HH220J	J AA	22 pF (CH),50V
C319	VCCCCY1HH180J	J AA	18 pF (CH),50V	C703	VCKYCY1EF104Z	J AA	0.1 μF,25V
C329	VCKYCY1EF223Z	J AB	0.022 μF,25V	C704	VCKYCY1EF223Z	J AB	0.022 μF,25V
C330	VCCCPA1HH120J	J AA	12 pF (CH),50V	C705	VCKYPA1HF103Z	J AB	0.01 μF,50V
C331	VCKYCY1EF473Z	J AB	0.047 μF,25V	C710	VCKYCY1EB103K	J AA	0.01 μF,25V
C332	VCKYPA1HF223Z	J AB	0.022 μF,50V	C711	RC-GZA335AF1H	J AB	3.3 μF,50V,Electrolytic
C334	VCCUPA1HJ270J	J AA	27 pF (UJ),50V	C712	VCKYCY1EB103K	J AA	0.01 μF,25V
C335	VCKYCY1HB561K	J AA	560 pF,50V	C713	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic
C337	VCKYPA1HF223Z	J AB	0.022 μF,50V	C714	VCKYCY1HB561K	J AA	560 pF,50V
C343	VCCSCY1HL330J	J AD	33 pF,50V	C715	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic
C349	VCKYCY1HB102K	J AA	0.001 μF,50V	C801	VCCSCY1HL101J	J AA	100 pF,50V
C350,351	VCKYCY1EF223Z	J AB	0.022 μF,25V	C802	VCKYCY1EB153K	J AA	0.015 μF,25V
C352	RC-GZA106AF1C	J AB	10 μF,16V,Electrolytic	C803	RC-EZD476AF1A	J AC	47 μF,10V,Electrolytic
C353,354	VCKYCY1EF223Z	J AB	0.022 μF,25V	C804	VCKYCY1EB103K	J AA	0.01 μF,25V
C355	VCCSCY1HL220J	J AD	22 pF,50V	C805	VCKYCY1HB272K	J AA	0.0027 μF,50V
C356	VCKYCY1HB102K	J AA	0.001 μF,50V	C806	VCKYCY1HB472K	J AA	0.0047 μF,50V
C357	RC-GZA225AF1H	J AB	2.2 μF,50V,Electrolytic	C807	VCKYCY1EB333K	J AC	0.033 μF,25V
C358	RC-GZA105AF1H	J AB	1 μF,50V,Electrolytic	C809	VCKYCY1HB472K	J AA	0.0047 μF,50V
C360,361	VCKYCY1EF223Z	J AB	0.022 μF,25V	C810	VCKYCY1HB102K	J AA	0.001 μF,50V
C362	RC-GZA335AF1H	J AB	3.3 μF,50V,Electrolytic	C811	RC-GZA476AF1A	J AB	47 μF,10V,Electrolytic

XL-3000V

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION	NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
C812	VCKYCY1EF103Z	J AA	0.01 μF,25V	R105,106	VRD-ST2EE471J	J AA	470 ohms,1/4W
C813	RC-EZD107AF1A	J AB	100 μF,10V,Electrolytic	R105V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
C817~819	VCKYCY1EB104K	J AD	0.1 μF,25V	R107V,108V	VRS-CY1JB103J	J AA	10 kohm,1/16W
C820	VCKYCY1EF103Z	J AA	0.01 μF,25V	R108	VRD-ST2CD102J	J AA	1 kohm,1/6W
C821	VCKYCY1EB104K	J AD	0.1 μF,25V	R109	VRD-ST2CD223J	J AA	22 kohms,1/6W
C822	RC-GZA227AF1A	J AB	220 μF,10V,Electrolytic	R110	VRS-CY1JB102J	J AA	1 kohm,1/16W
C823	VCKYCY1EF103Z	J AA	0.01 μF,25V	R111	VRD-ST2CD102J	J AA	1 kohm,1/6W
C824,825	VCKYCY1EB563K	J AD	0.056 μF,25V	R111V	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
C826,827	VCCCCY1HH150J	J AA	15 pF (CH),50V	R112V	VRS-CY1JB560J	J AA	56 ohms,1/16W
C828	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	△ R113,114	VRG-ST2EC101J	J AB	100 ohm,1/4W,Fusible
C829	RC-EZD107AF1A	J AB	100 μF,10V,Electrolytic	R113V	VRS-CY1JB101J	J AA	100 ohm,1/16W
C830	VCKYCY1EB563K	J AD	0.056 μF,25V	R114V	VRS-CY1JB682J	J AA	6.8 kohms,1/16W
C835	VCKYCY1EB563K	J AD	0.056 μF,25V	R115	VRD-ST2CD563J	J AA	56 kohms,1/6W
C836	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	R115V,116V	VRS-CY1JB153J	J AA	15 kohms,1/16W
C837	VCKYCY1HB471K	J AA	470 pF,50V	R118	VRD-ST2EE473J	J AA	47 kohms,1/4W
C838	RC-EZD476AF1A	J AC	47 μF,10V,Electrolytic	R119	VRS-CY1JB333J	J AA	33 kohms,1/16W
C839	VCCSCY1HL2R0C	J AD	2 pF,50V	R120	VRS-CY1JB102J	J AA	1 kohm,1/16W
C840,841	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	R121	VRS-CY1JB103J	J AA	10 kohm,1/16W
C842	RC-GZA476AF1A	J AB	47 μF,10V,Electrolytic	R121V	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
C843	VCKYCY1EF104Z	J AA	0.1 μF,25V	R122	VRS-CY1JB102J	J AA	1 kohm,1/16W
C844	VCKYCY1HB682K	J AA	0.0068 μF,50V	R123	VRD-ST2EE103J	J AA	10 kohm,1/4W
C845	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	R123V	VRS-CY1JB750J	J AA	75 ohms,1/16W
C846,847	VCKYCY1EF104Z	J AA	0.1 μF,25V	R124	VRS-CY1JB473J	J AA	47 kohms,1/16W
C848	VCCSCY1HL390J	J AD	39 pF,50V	R124V	VRS-CY1JB221J	J AA	220 ohms,1/16W
C849	VCKYCY1EB563K	J AD	0.056 μF,25V	R125,126	VRS-VV3LA681J	J AC	680 ohms,3W,Metal Oxide Film
C850	RC-GZA227AF1A	J AB	220 μF,10V,Electrolytic	R137V	VRS-CY1JB102J	J AA	1 kohm,1/16W
C851	RC-EZD107AF1A	J AB	100 μF,10V,Electrolytic	R138V	VRS-CY1JB330J	J AA	33 ohms,1/16W
C852	VCQYKA1HM222J	J AB	0.0022 μF,50V,Mylar	R139V~141V	VRS-CY1JB102J	J AA	1 kohm,1/16W
C853	VCKYPA1HB472K	J AB	0.0047 μF,50V	R142V	VRS-CY1JB330J	J AA	33 ohms,1/16W
C855	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	R143V	VRS-CY1JB221J	J AA	220 ohms,1/16W
C857	RC-GZA476AF1C	J AB	47 μF,16V,Electrolytic	R156V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
C858	VCKYCY1EF103Z	J AA	0.01 μF,25V	R157V~159V	VRS-CY1JB821J	J AA	820 ohms,1/16W
C859	RC-GZA477AF1A	J AC	470 μF,10V,Electrolytic	R160V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
C860	VCKYCY1EF104Z	J AA	0.1 μF,25V	R161V	VRS-CY1JB330J	J AA	33 ohms,1/16W
C862	VCKYPA1HB102K	J AA	0.001 μF,50V	R162V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
C863	VCKYCY1HB471K	J AA	470 pF,50V	R163V	VRS-CY1JB330J	J AA	33 ohms,1/16W
C864~869	VCKYCY1HB221K	J AA	220 pF,50V	R164V,165V	VRS-CY1JB100J	J AA	10 ohm,1/16W
C870	VCKYPA1HB102K	J AA	0.001 μF,50V	R166V~169V	VRS-CY1JB330J	J AA	33 ohms,1/16W
C871	RC-EZD476AF1C	J AC	47 μF,16V,Electrolytic	R170V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
C872	VCKYCY1EB104K	J AD	0.1 μF,25V	R171V	VRS-CY1JB104J	J AA	100 kohm,1/16W
C887	VCKYCY1HB272K	J AA	0.0027 μF,50V	R178V	VRS-CY1JB820J	J AA	82 ohms,1/16W
C892,893	RC-EZD476AF1C	J AC	47 μF,16V,Electrolytic	R181V~184V	VRS-CY1JB104J	J AA	100 kohm,1/16W
C901,902	RC-GZV227AF1H	J AC	220 μF,50V,Electrolytic	R185V~190V	VRS-CY1JB103J	J AA	10 kohm,1/16W
C903,904	RC-EZ0002SJZZ	J AD	10 μF,50V,Electrolytic	R193V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
C905,906	RC-GZA107AF1A	J AB	100 μF,10V,Electrolytic	R194V	VRS-CY1JB271J	J AA	270 ohms,1/16W
				R195V	VRS-CY1JB101J	J AA	100 ohm,1/16W
				R201	VRD-ST2CD822J	J AA	8.2 kohms,1/6W
				R202	VRS-CY1JB822J	J AA	8.2 kohms,1/16W
				R203,204	VRS-CY1JB104J	J AA	100 kohm,1/16W
				R205,206	VRS-CY1JB103J	J AA	10 kohm,1/16W
				R207	VRD-ST2CD473J	J AA	47 kohms,1/16W
				R208	VRD-ST2EE331J	J AA	330 ohms,1/4W
				R209	VRS-CY1JB103J	J AA	10 kohm,1/16W
				R210	VRD-ST2CD103J	J AA	10 kohm,1/6W
				R211	VRS-CY1JB272J	J AA	2.7 kohms,1/16W
				R212	VRD-ST2CD272J	J AA	2.7 kohms,1/6W
				R213~216	VRS-CY1JB123J	J AA	12 kohms,1/16W
				R217	VRD-ST2CD123J	J AA	12 kohms,1/6W
				R218	VRS-CY1JB123J	J AA	12 kohms,1/16W
				R301	VRD-ST2EE220J	J AA	22 ohms,1/4W
				R302	VRS-CY1JB104J	J AA	100 kohm,1/16W
				R303	VRD-ST2CD333J	J AA	33 kohms,1/6W
				R304	VRS-CY1JB473J	J AA	47 kohms,1/16W
				R305	VRS-CY1JB681J	J AA	680 ohms,1/16W
				R306	VRS-CY1JB100J	J AA	10 ohm,1/16W
				R307	VRD-ST2EE470J	J AA	47 ohms,1/4W
				R308	VRS-CY1JB103J	J AA	10 kohm,1/16W
				R309	VRD-ST2EE471J	J AA	470 ohms,1/4W
				R310	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
				R312	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
				R313	VRS-CY1JB681J	J AA	680 ohms,1/16W
				R314,315	VRS-CY1JB330J	J AA	33 ohms,1/16W
				R316	VRS-CY1JB331J	J AA	330 ohms,1/16W
				R323	VRS-CY1JB683J	J AA	68 kohms,1/16W
				R336	VRD-ST2CD562J	J AA	5.6 kohms,1/6W
				R350	VRS-CY1JB272J	J AA	2.7 kohms,1/16W
				R351	VRS-CY1JB562J	J AA	5.6 kohms,1/16W
				R352	VRS-CY1JB102J	J AA	1 kohm,1/16W
				R353	VRS-CY1JB271J	J AA	270 ohms,1/16W
				R355	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
				R356	VRS-CY1JB102J	J AA	1 kohm,1/16W
				R357	VRS-CY1JB474J	J AA	470 kohms,1/16W

RESISTORS

R01AV~03AV	VRS-CY1JB000J	J AA	0 ohm,Jumper,0.8x1.55mm,Green
R06AV~12AV	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R5V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R7A0	VRS-CY1JB102J	J AA	1 kohm,1/16W
R7A1	VRS-CY1JB102J	J AA	1 kohm,1/16W
R7A2	VRS-CY1JB104J	J AA	100 kohm,1/16W
R7A3	VRD-ST2EE101J	J AA	100 ohm,1/4W
R7A4	VRS-CY1JB121J	J AA	120 ohms,1/16W
R7A5	VRS-CY1JB103J	J AA	10 kohm,1/16W
R7A6	VRS-CY1JB102J	J AA	1 kohm,1/16W
R7A7	VRS-CY1JB102J	J AA	1 kohm,1/16W
R7A8	VRS-CY1JB820J	J AA	82 ohms,1/16W
R7A9	VRD-ST2CD332J	J AA	3.3 kohms,1/6W
R7B0	VRS-CY1JB103J	J AA	10 kohm,1/16W
R80A	VRS-CY1JB823J	J AA	82 kohms,1/16W
R80B	VRS-CY1JB683J	J AA	68 kohms,1/16W
R80C	VRS-CY1JB823J	J AA	82 kohms,1/16W
R80E	VRS-CY1JB823J	J AA	82 kohms,1/16W
R80F	VRS-CY1JB823J	J AA	82 kohms,1/16W
R80G	VRD-ST2CD683J	J AA	68 kohms,1/6W
R91V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R93V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R94AV	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R94BV	VRS-CY1JB000J	J AA	0 ohm,Jumper,0.8x1.55mm,Green
R97V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R98V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R100V	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R101,102	VRS-CY1JB393J	J AA	39 kohms,1/16W
R101V,102V	VRS-CY1JB104J	J AA	100 kohm,1/16W
R103	VRS-CY1JB102J	J AA	1 kohm,1/16W
R103V	VRS-CY1JB682J	J AA	6.8 kohms,1/16W
R104	VRD-ST2CD563J	J AA	56 kohms,1/6W
R104V	VRS-CY1JB103J	J AA	10 kohm,1/16W

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION	NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
R358	VRS-CY1JB822J	J AA	8.2 kohms,1/16W	R778~781	VRS-CY1JB473J	J AA	47 kohms,1/16W
R359	VRS-CY1JB182J	J AA	1.8 kohms,1/16W	R782	VRS-CY1JB102J	J AA	1 kohm,1/16W
R360	VRS-CY1JB472J	J AA	4.7 kohms,1/16W	R783	VRS-CY1JB333J	J AA	33 kohms,1/16W
R361,362	VRS-CY1JB562J	J AA	5.6 kohms,1/16W	R785	VRS-CY1JB102J	J AA	1 kohm,1/16W
R363	VRD-ST2CD332J	J AA	3.3 kohms,1/6W	R792	VRS-CY1JB473J	J AA	47 kohms,1/16W
R364	VRS-CY1JB332J	J AA	3.3 kohms,1/16W	R793	VRS-CY1JB103J	J AA	10 kohm,1/16W
R365	VRS-CY1JB103J	J AA	10 kohm,1/16W	R795	VRD-ST2CD473J	J AA	47 kohms,1/6W
R366	VRS-CY1JB222J	J AA	2.2 kohms,1/16W	R796	VRD-ST2EE102J	J AA	1 kohm,1/4W
R371~374	VRS-CY1JB102J	J AA	1 kohm,1/16W	R797	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
R376	VRD-ST2CD103J	J AA	10 kohm,1/6W	R798	VRS-CY1JB472J	J AA	4.7 kohms,1/16W
R377	VRD-ST2CD562J	J AA	5.6 kohms,1/6W	R799	VRD-ST2EE102J	J AA	1 kohm,1/4W
R379	VRS-CY1JB222J	J AA	2.2 kohms,1/16W	R801	VRD-ST2CD103J	J AA	10 kohm,1/6W
R380	VRD-ST2CD152J	J AA	1.5 kohms,1/6W	R802	VRS-CY1JB473J	J AA	47 kohms,1/16W
R381	VRS-CY1JB103J	J AA	10 kohm,1/16W	R804	VRS-CY1JB104J	J AA	100 kohm,1/16W
R382	VRD-ST2EE331J	J AA	330 ohms,1/4W	R806	VRS-CY1JB153J	J AA	15 kohms,1/16W
R383	VRS-CY1JB562J	J AA	5.6 kohms,1/16W	R807	VRS-CY1JB103J	J AA	10 kohm,1/16W
R384	VRD-ST2CD682J	J AA	6.8 kohms,1/6W	R808	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R385	VRD-ST2CD562J	J AA	5.6 kohms,1/6W	R809	VRS-CY1JB103J	J AA	10 kohm,1/16W
R386	VRD-ST2EE331J	J AA	330 ohms,1/4W	R810	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R387	VRD-ST2CD562J	J AA	5.6 kohms,1/6W	R811	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
R391,392	VRD-ST2EE391J	J AA	390 ohms,1/4W	R812	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R393	VRS-CY1JB102J	J AA	1 kohm,1/16W	R813	VRD-ST2EE100J	J AA	10 ohm,1/4W
R395	VRD-ST2CD473J	J AA	47 kohms,1/6W	R814	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R401,402	VRS-CY1JB102J	J AA	1 kohm,1/16W	R819	VRD-ST2CD221J	J AA	220 ohms,1/6W
R403,404	VRS-CY1JB182J	J AA	1.8 kohms,1/16W	R820	VRS-CY1JB102J	J AA	1 kohm,1/16W
R405,406	VRD-ST2CD273J	J AA	27 kohms,1/6W	R821	VRD-ST2CD151J	J AA	150 ohms,1/6W
R407,408	VRD-ST2CD272J	J AA	2.7 kohms,1/6W	R822	VRD-ST2EE330J	J AA	33 ohms,1/4W
R415~418	VRS-CY1JB102J	J AA	1 kohm,1/16W	R823	VRD-ST2CD102J	J AA	1 kohm,1/6W
R421,422	VRS-CY1JB102J	J AA	1 kohm,1/16W	R824	VRS-CY1JB473J	J AA	47 kohms,1/16W
R423~425	VRD-ST2CD102J	J AA	1 kohm,1/6W	R825	VRS-CY1JB823J	J AA	82 kohms,1/16W
R437,438	VRS-CY1JB682J	J AA	6.8 kohms,1/16W	R826	VRS-CY1JB272J	J AA	2.7 kohms,1/16W
R439,440	VRS-CY1JB392J	J AA	3.9 kohms,1/16W	R827	VRS-CY1JB393J	J AA	39 kohms,1/16W
R603,604	VRS-CY1JB103J	J AA	10 kohm,1/16W	R828	VRS-CY1JB122J	J AA	1.2 kohms,1/16W
R607	VRS-CY1JB682J	J AA	6.8 kohms,1/16W	R829	VRD-ST2CD683J	J AA	68 kohms,1/6W
R608,609	VRS-CY1JB102J	J AA	1 kohm,1/16W	R830	VRD-ST2CD102J	J AA	1 kohm,1/6W
R610	VRD-ST2EE470J	J AA	47 ohms,1/4W	R831~837	VRS-CY1JB102J	J AA	1 kohm,1/16W
R611	VRD-ST2EE101J	J AA	100 ohm,1/4W	R843	VRD-ST2CD102J	J AA	1 kohm,1/6W
R612	VRD-ST2EE821J	J AA	820 ohms,1/4W	R851	VRS-CY1JB331J	J AA	330 ohms,1/16W
R613	VRS-CY1JB472J	J AA	4.7 kohms,1/16W	R852~855	VRS-CY1JB104J	J AA	100 kohm,1/16W
R614	VRD-ST2EE470J	J AA	47 ohms,1/4W	R861~863	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
R617	VRD-ST2CD333J	J AA	33 kohms,1/6W	R864,865	VRD-ST2CD273J	J AA	27 kohms,1/6W
R619,620	VRD-ST2EE470J	J AA	47 ohms,1/4W	R866	VRD-ST2CD472J	J AA	4.7 kohms,1/6W
R621	VRS-CY1JB223J	J AA	22 kohms,1/16W	R867	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R623,624	VRS-CY1JB223J	J AA	22 kohms,1/16W	R868	VRS-CY1JB273J	J AA	27 kohms,1/16W
R628	VRD-ST2EE101J	J AA	100 ohm,1/4W	R870	VRS-CY1JB333J	J AA	33 kohms,1/16W
R629	VRD-ST2EE821J	J AA	820 ohms,1/4W	R873	VRD-ST2CD332J	J AA	3.3 kohms,1/6W
R634	VRD-ST2EE332J	J AA	3.3 kohms,1/4W	R874	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
R637,638	VRD-ST2EE4R7J	J AA	4.7 ohms,1/4W	R876	VRS-CY1JB154J	J AA	150 kohms,1/16W
R661,662	VRD-ST2EE331J	J AA	330 ohms,1/4W	R877	VRS-CY1JB683J	J AA	68 kohms,1/16W
R685	VRD-ST2CD103J	J AA	10 kohm,1/6W	R879	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R686	VRD-ST2CD473J	J AA	47 kohms,1/6W	R880	VRS-CY1JB332J	J AA	3.3 kohms,1/16W
R687	VRD-RT2HD272J	J AA	2.7 kohms,1/2W	R881	VRS-CY1JB474J	J AA	470 kohms,1/16W
R688	VRD-ST2CD102J	J AA	1 kohm,1/6W	R882	VRS-CY1JB682J	J AA	6.8 kohms,1/16W
R689	VRD-ST2EE102J	J AA	1 kohm,1/4W	R883,884	VRD-ST2EE8R2J	J AA	8.2 ohms,1/4W
R702	VRS-CY1JB103J	J AA	10 kohm,1/16W	R885	VRS-CY1JB223J	J AA	22 kohms,1/16W
R706	VRS-CY1JB392J	J AA	3.9 kohms,1/16W	R887	VRS-CY1JB223J	J AA	22 kohms,1/16W
R707	VRS-CY1JB272J	J AA	2.7 kohms,1/16W	R888	VRD-ST2CD103J	J AA	10 kohm,1/6W
R708	VRS-CY1JB222J	J AA	2.2 kohms,1/16W	R901	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
R710	VRS-CY1JB272J	J AA	2.7 kohms,1/16W	R902	VRS-CY1JB473J	J AA	47 kohms,1/16W
R711	VRS-CY1JB122J	J AA	1.2 kohms,1/16W	R904	VRS-CY1JB222J	J AA	2.2 kohms,1/16W
R718	VRS-CY1JB152J	J AA	1.5 kohms,1/16W	R905	VRS-CY1JB473J	J AA	47 kohms,1/16W
R719	VRS-CY1JB122J	J AA	1.2 kohms,1/16W	R910	VRD-ST2EE272J	J AA	2.7 kohms,1/4W
R720A,B	VRS-CY1JB122J	J AA	1.2 kohms,1/16W	R911	VRD-ST2EE101J	J AA	100 ohm,1/4W
R721,722	VRS-CY1JB103J	J AA	10 kohm,1/16W	R912	VRD-ST2EE471J	J AA	470 ohms,1/4W
R723	VRS-CY1JB473J	J AA	47 kohms,1/16W	△ R913	VRG-ST2EM100J	J	10 ohm,1/4W,Fusible
R725	VRS-CY1JB103J	J AA	10 kohm,1/16W	R914	VRD-ST2CD471J	J AA	470 ohms,1/6W
R727	VRS-CY1JB473J	J AA	47 kohms,1/16W				
R728	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R729	VRS-CY1JB473J	J AA	47 kohms,1/16W				
R731~735	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R738~742	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R744	VRD-ST2CD102J	J AA	1 kohm,1/6W				
R749,750	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R751	VRD-ST2CD102J	J AA	1 kohm,1/6W				
R755	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R757,758	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R759	VRD-ST2CD102J	J AA	1 kohm,1/6W				
R760~766	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R768	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R769~771	VRD-ST2CD102J	J AA	1 kohm,1/6W				
R772,773	VRS-CY1JB102J	J AA	1 kohm,1/16W				
R776,777	VRS-CY1JB102J	J AA	1 kohm,1/16W				

OTHER CIRCUITRY PARTS

CFW451,452	QCWNW0308SJZZ	J AB	Lead Wire
CFW701A,B	QCWNW0292SJZZ	J AD	Flat Wire,3Pin
CFW852	QCWNW0303SJZZ	J AB	Lead Wire
CNP307	QCNCM010LAWZZ	J AC	Plug,11Pin
CNP601,602	QCNCM999CAFZZ	J AG	Plug,3Pin
CNP607	QCNCM999CAFZZ	J AG	Plug,3Pin
CNP608	QCNCM004BAFZZ	J AB	Plug,2Pin
△ CNP651	QCNCM041ESJZZ	J AE	Plug,5Pin
CNP652	QCNCM998BAFZZ	J AC	Plug,2Pin
CNP653	QCNCM998BAFZZ	J AC	Plug,2Pin
CNP701	QCNCM999BAFZZ	J AD	Plug,2Pin
CNP702	QCNCM999KAFZZ	J	Plug,10Pin
CNP703	QCNCM999NAFZZ	J AC	Plug,13Pin

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NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
CNP707	QCNCM998DAFZZ	J AB	Plug,4Pin
CNP801	QCNCM037ESJZZ	J AD	Plug,5Pin
CNP801V	QCNCW010MSJZZ	J	Plug,12Pin
CNP802	QCNCW007RSJZZ	J AF	Socket,16Pin
CNP802A	QCNCM999HAFZZ	J AD	Plug,8Pin
CNP803	QCNCM035FSJZZ	J AD	Plug,6Pin
CNP804	QCNCM038BSJZZ	J AB	Plug,2Pin
CNP804V	QCNCM010LAWZZ	J AB	Plug,7Pin
CNP805	QCNCM004CAFZZ	J AB	Plug,3Pin
CNP806	QCNCM999CAFZZ	J AG	Plug,3Pin
CNP807	QCNCM999BAFZZ	J AD	Plug,2Pin
CNP810	QCNCM999BAFZZ	J AD	Plug,2Pin
CNS307	QCNCW010LAWZZ	J AD	Socket,11Pin
CNS801	QCNCW010MSJZZ	J	Socket,12Pin
CNW3	QCNCW0288SJZZ	J AE	Flat Cable,16Pin
CNW601,602	QCNCW0326SJZZ	J	Connector Ass'y,3Pin
CNW607/CNS607	QCNCW0291SJZZ	J AE	Connector Ass'y,3/3Pin
CNW608/CNS608	QCNCW0314SJZZ	J	Connector Ass'y,2/2Pin
CNW653	QCNCW0331SJZZ	J	Connector Ass'y,2Pin
CNW701/CNS701	QCNCW0271SJZZ	J AD	Connector Ass'y,2/2Pin
CNW702/CNS702	QCNCW0311SJZZ	J	Connector Ass'y,10/10Pin
CNW703A/CNS703	QCNCW0332SJZZ	J	Connector Ass'y,13/13Pin
CNW704/CNS704	QCNCW0324SJZZ	J	Connector Ass'y,7/7Pin
CNW707/CNS707/CNS652	QCNCW0301SJZZ	J AD	Connector Ass'y,3/4/2Pin
CNW801	QCNCW0312SJZZ	J	Flat Cable,12Pin
CNW802V/CNS802	QCNCW0313SJZZ	J	Connector Ass'y,9/8Pin
CNW803/CNS803	QCNCW0276SJZZ	J AE	Connector Ass'y,6/6Pin
CNW804/CNS804	QCNCW0290SJZZ	J AD	Connector Ass'y,2Pin
CNW805/CNS805	QCNCW0296SJZZ	J AE	Connector Ass'y,3/3Pin
CNW806/CNS806	QCNCW0270SJZZ	J AE	Connector Ass'y,3/3Pin
CNW807/CNS807	QCNCW0271SJZZ	J AD	Connector Ass'y,2/2Pin
△ F651,652	QFS-D322ABGNI	J AE	Fuse,T3.15A L 250V
△ F653	QFS-D162ABGNI	J	Fuse,T1.6A L 250V
△ F654	QFS-T202BSJNO	J	Temperature Fuse,2A,250V
J601	QJAKM0001SJZZ	J AG	Jack,Headphones
J801	VHPPPLT130T2-1	J AM	Jack,CD Degital Output
LCD701	RV-LX0012SJZZ	J AR	LCD Display
LMP701	RLMPP0001SJZZ	J AT	Lamp
M801	RMOTV0004SJM1	J AM	Motor with Gear [CD Lid]
M802	RMOTV0006SJM1	J AP	Fan Motor
NM801	RMOTV0409AFM1	J AN	Motor with Gear [Sled]
NM802	RMOTV0408SJM1	J AR	Motor with Chassis [Spindle]
NSW801	QSW-F9001AWZZ	J AE	Switch,Push Type [Pickup In]
△ RLY601	RRLYD0004SJZZ	J AG	Relay
RX701	VHLN64H380A-1	J AK	Remote Sensor
SO301	QTANC9003SJZZ	J AF	Terminal,Antenna
SO401	QSOCJ0302SJZZ	J AE	Socket,Video/AUX Input/Video Out
SO601	QTANA0007SJZZ	J AF	Terminal,Speaker
△ SO655	QSOCA0212AWZZ	J AD	Socket AC Input
△ SW651	QSOCE0008AWZZ	J AH	Switch,Rotary Type [Voltage Selector]
SW709	QSW-K0004SJZZ	J AD	Switch,Key Type [On/Stand-by]
SW710	QSW-K0004SJZZ	J AD	Switch,Key Type [CD Lid Open/Close]
SW711	QSW-K0004SJZZ	J AD	Switch,Key Type [FF/Presel Up]
SW712	QSW-K0004SJZZ	J AD	Switch,Key Type [CD Play/Pause/Tuning Up]
SW713	QSW-K0004SJZZ	J AD	Switch,Key Type [Volume Up]
SW718	QSW-K0004SJZZ	J AD	Switch,Key Type [Volume Down]
SW721	QSW-K0004SJZZ	J AD	Switch,Key Type [Memory/Set]
SW722	QSW-K0004SJZZ	J AD	Switch,Key Type [Bass/Treble]
SW725	QSW-K0004SJZZ	J AD	Switch,Key Type [CD Stop/Tuning Down]
SW726	QSW-K0004SJZZ	J AD	Switch,Key Type [REW/Presel Down]
SW727	QSW-K0004SJZZ	J AD	Switch,Key Type [Function]
SW802	QSW-B0001SJZZ	J AG	Switch,Lever Type [CD Lid]

CD MECHANISM PARTS

301	NGERH0586AFZZ	J AC	Gear,Middle
302	NGERH0587AFZZ	J AC	Gear,Drive
303	MLEVP0010AWZZ	J AC	Rail,Guide
304	NSFTM0291AFFW	J AD	Shaft,Guide
305	PCOVP1333AFSA	J AF	Cover,Mechanism
306	PCUSG0001AWSA	J AD	Cushion (Green)
307	PCUSG0004AWSA	J AD	Cushion (Red-Brown)
△ 308	DCTRH8005SJ01	J BA	Pickup Unit Ass'y
308- 1			Pickup Unit (Not Replacement Item)
308- 2	NGERR0043AFZZ	J AC	Gear,Rack
308- 3	MSPRC0961AFZZ	J AA	Spring,Rack

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
701	LX-WZ1070AFZZ	J AA	Washer,ø1.5×ø3.8×0.25mm
702	XBBSD20P03000	J AA	Screw,ø2×3mm
703	XBSSD26P06000	J AA	Screw,ø2.6×6mm
704	XHBSD20P05000	J AA	Screw,ø2×5mm
NM801	RMOTV0409AFM1	J AN	Motor with Gear [Sled]
NM802	RMOTV0408SJM1	J AR	Motor with Chassis [Spindle]
NSW801	QSW-F9001AWZZ	J AE	Switch,Push Type [Pickup In]

CABINET PARTS

200	GCABA1073SJSA	J	Front Cabinet
201	GCABB1066SJSA	J AL	Bottom Cabinet
202	GCOVA1013SJSA	J	Rear Panel
203	GCOVA1005SJSA	J AE	Cover,Remote Sensor
204	GFTAT1008SJSA	J AN	CD Lid
205	LANGQ0002SJFW	J AB	Lug
206	HDECQ0060SJSA	J	Clear Panel,CD Lid
207	HDECQ0051SJSA	J AE	Clear Panel,Display
208	JKNBZ0053SJSA	J AF	Knob,Operation A
209	JKNBZ0054SJSA	J AF	Knob,Operation B
210	LANGF0033SJFW	J AB	Bracket,Main PWB
211	LANGF0034SJFW	J AB	Bracket,Tuner PWB
212	LANGF0035SJFW	J AC	Bracket,Gear Box
213	LANGK0025SJFW	J AE	Bracket,Tuner PWB
214	LANGK0026SJFW	J AB	Cover,Lamp
215	LCHSM0014SJFW	J AH	Chassis
216	LHLDW1001SJZZ	J AD	Nylon Band
217	LHLDZ1033SJSA	J AD	LCD Holder,A
218	LHLDZ1034SJSA	J AD	LED Holder,A
219	LHLDZ1035SJSA	J AE	Gear Box
220	LHLDZ1036SJSA	J AE	Lid,Gear Box
221	LPLTP0001SJSA	J AE	Cam Plate
222	MLEVP0006SJSA	J AE	Rotate Lever,CD Lid,Left
223	MLEVP0007SJSA	J AE	Rotate Lever,CD Lid,Right
224	NGERW0004SJSA	J AE	Drive Gear,A
225	NGERW0005SJSA	J AE	Drive Gear,B
226	NGERW0006SJSA	J AG	Drive Gear,C
228	PCOVU9002SJZZ	J AB	Felt,CD Lid Cover
229	PCOVZ1005SJSA	J AE	Indicator Panel
230	PCUSG0003SJZZ	J AC	Cushion,Leg
231	PGUMS0002SJZZ	J AA	Cushion,CD Lid
232	PRDAR0051SJFW	J	Radiator,Main
233	PRDAR0038SJFW	J AE	Radiator,Transistor
234	PREFL0001SJSA	J AD	LCD Diffusion Plate
235	PSHEP0003SJZZ	J AE	Sheet,LCD
236	PSHEP0004SJZZ	J AD	LCD Reflect Paper
237	QFSDH0001AWZZ	J AB	Holder,Fuse
238	TLABS0004SJZZ	J AC	Label,Laser
239	TLABS0036SJZZ	J AB	Label,Class 3A
240	TSPC-0254SJZZ	J	Label,Specification [Except for Thailand/Philippines]
240	TSPC-0271SJZZ	J	Label,Specification [For Thailand]
240	TSPC-0282SJZZ	J	Label,Specification [For Philippines]
241	PCOVS3005SJFW	J AE	Plate,Shield
242	PRDAR0048SJFW	J	Radiator,Sub
243	LANGF0037SJFW	J AC	Bracket,Fan Motor
244	LANGK0029SJFW	J AB	Bracket,Decode PWB
245	LANGK0028SJFW	J	Bracket,Decode PWB
246	PCOVP1003SJZZ	J	Shield Cover,Power PWB (A)
247	PCOVP1004SJZZ	J	Shield Cover,Power PWB (B)
248	PSPAH0001SJZZ	J AC	Felt
249	PCOVM3001SJFW	J	Shield Cover
250	PCOVU9001SJZZ	J AC	Cover,Lamp
251	PCOVU9001SJZZ	J AC	Felt
252	LX-WZ9005SJZZ	J	Thermo Shield Cover
601	LX-EZ0001SJFN	J AB	Screw,ø2.5×10mm
602	LX-WZ7094AFZZ	J AA	Washer,Special Type
603	XEBSD25P08000	J AA	Screw,ø2.5×8mm
604	XEBSD25P10000	J AA	Screw,ø2.5×10mm
605	XEBSD25P12000	J AA	Screw,ø2.5×12mm
606	XEBSF25P08000	J AA	Screw,ø2.5×8mm
607	XHBSD20P05000	J AA	Screw,ø2×5mm
608	XHBSD30P06000	J AA	Screw,ø3×6mm
609	XHBSD40P08000	J AA	Screw,ø4×8mm
610	XJBSD30P06000	J AA	Screw,ø3×6mm
611	XJBSD30P08000	J AA	Screw,ø3×8mm
612	XJBSD30P10000	J AA	Screw,ø3×10mm
613	XJBSD30P14000	J AA	Screw,ø3×14mm
615	XJBSF30P10000	J AA	Screw,ø3×10mm

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
616	XJBSF30P12000	J AA	Screw,ø3×12mm
617	XJPSF30P11000	J AA	Screw,ø3×11mm
618	XEBSD25P14000	J AA	Screw,ø2.5×14mm
619	XHBSD25P08000	J AA	Screw,ø2.5×8mm
620	XESSD25P12000	J AA	Screw,ø2.5×12mm
621	XWSS03-01050	J AA	Washer,ø3×5mm×0.1mm
622	LX-JZ0001SJFD	J AA	Screw,ø3×10mm
623	LX-WZ9006SJZZ	J	Thermo Shield Washer,Special Type

SPEAKER BOX PARTS

901	CPNLS1006SJ01	J AS	Front Panel Ass'y
902	GBOXS0009SJSA	J AZ	Box Ass'y
903	GWAKP1016SJ01	J AM	Net Flame Ass'y
904	PDUC-0001SJZZ	J AE	Duct Pipe
905	PGUMM0003SJSA	J AD	Net Catcher
906	PSPAG0002SJZZ	J AD	Gasket
907	QTANA9011SJZZ	J AE	Terminal
908	TSPC-0221SJZZ	J AD	Specification Label
909	HSY042SPK07	J AE	Capacitor,3.3 µF,50V (N.P.)
910	XTBSF40P12000	J AA	Screw,ø4×12mm
SP1,2	RSPA00005SJ6W	J AQ	Woofer
SP3,4	RSPA00004SJ6T	J AK	Tweeter

ACCESSORIES/PACKING PARTS

△	QACCA0001SJ00	J AS	Battery (Not Replacement Item) AC Power Supply Cord [For Saudi Arabia]
△	QACCB0001SJ00	J AW	AC Power Supply Cord [For Hong Kong]
△	QACCE0001SJZZ	J AH	AC Power Supply Cord [Except for Saudi Arabia/Hong Kong]
	QANTL0001SJZZ	J AK	AM Loop Antenna
	QANTW0002SJZZ	J AH	FM Antenna
	QCNWH0005SJ01	J	Speaker Cord
△	QPLGA0250AFZZ	J AF	AC Plug Adapter [For Malaysia/Philippines]
△	QPLGA0253AFZZ	J AE	AC Plug Adapter [For Saudi Arabia]
	SPAKA0058SJZZ	J AE	Packing Add.,Left
	SPAKA0059SJZZ	J AE	Packing Add.,Right
	SPAKA0068SJZZ	J	Packing Add.,Speaker [Top/Bottom]
	SPAKC0178SJZZ	J	Packing Case
	SPAKS0003SJZZ	J	Sleeve Carton,Speaker
	SPAKZ0008SJZZ	J	Polyethylene Bag,Speaker
	SPAKZ0030SJZZ	J AC	Pad,Accessories
	SPAKZ0040SJZZ	J AD	Pad
	SPAKZ0064SJZZ	J AC	Polyethylene Bag,Unit
	SSAKA0002SJZZ	J AE	Polyethylene Bag,Accessories
	TGANE0002SJ15	J	Warranty Card [For Philippines]
	TINSZ0103SJZZ	J	Operation Manual [Except for Thailand]
	TINSZ0113SJZZ	J	Operation Manual [For Thailand]
	TLABE0105SJZZ	J	Label,Bar Code [For Union of Arab Emirates/ Hong Kong/ Thailand/ Philippines]
	TLABG0001SJZZ	J AB	Label,Hong Kong
	TLABG0044SJZZ	J	Label,Rated Input [For Hong Kong]
	TLABM0044SJZZ	J AB	Label,MP-3
	TLABN0140SJZZ	J	Label,Serial No.
	TLABZ0009SJZZ	J AD	Label,Made in China [For Syria]
	TLABZ0010SJZZ	J AD	Label,Made in China [Except for Syria]
	TLABZ0011SJZZ	J AD	Label,SHARP Japan [For Syria/ Union of Arab Emirates]
	TLABZ0012SJZZ	J AC	Label,SHARP Corporation JAPAN [For Syria/Union of Arab Emirates]
	TLABZ0015SJZZ	J AC	Label,VJ No.
	TLABZ0019SJZZ	J AC	Label,M-I-C
	TLSTS0004SJZZ	J AB	Service Station List [For Saudi Arabia]
	Z-SER-NO-LIST	J AC	List,Serial No.
	RRMCG0030SJSA	J	Remote Control
	GCABB1064SJSA	J	Battery Lid,Remote Control

NO.	PARTS CODE	★ PRICE RANK	DESCRIPTION
P.W.B. ASSEMBLY (Not Replacement Item)			
PWB-A1~8	DCEKLV035SJ03	J	Main/Tuner/Display/Terminal/Switch/Led/Lamp/Holder
△ PWB-B	DCEKJV035SJ03	J	Power
PWB-C	QPWBF3895AFZZ	J AC	CD Motor (PWB Only)
PWB-D	DCEKS0005SJ03	J	Video

OTHER SERVICE PART

UDSKA0004AFZZ	J AZ	CD Pickup Lens Cleaner Disc
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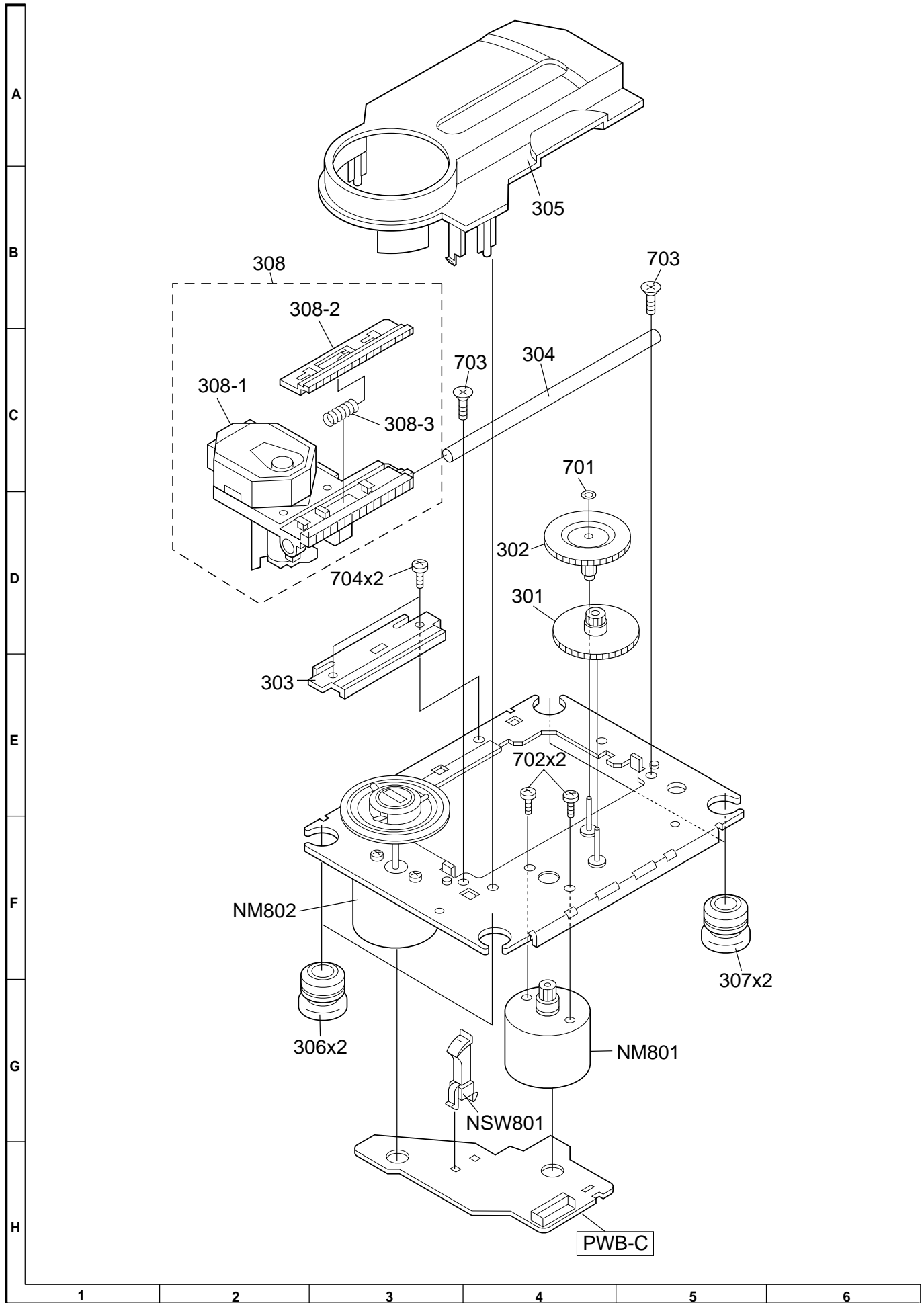


Figure 7 CD MECHANISM EXPLODED VIEW

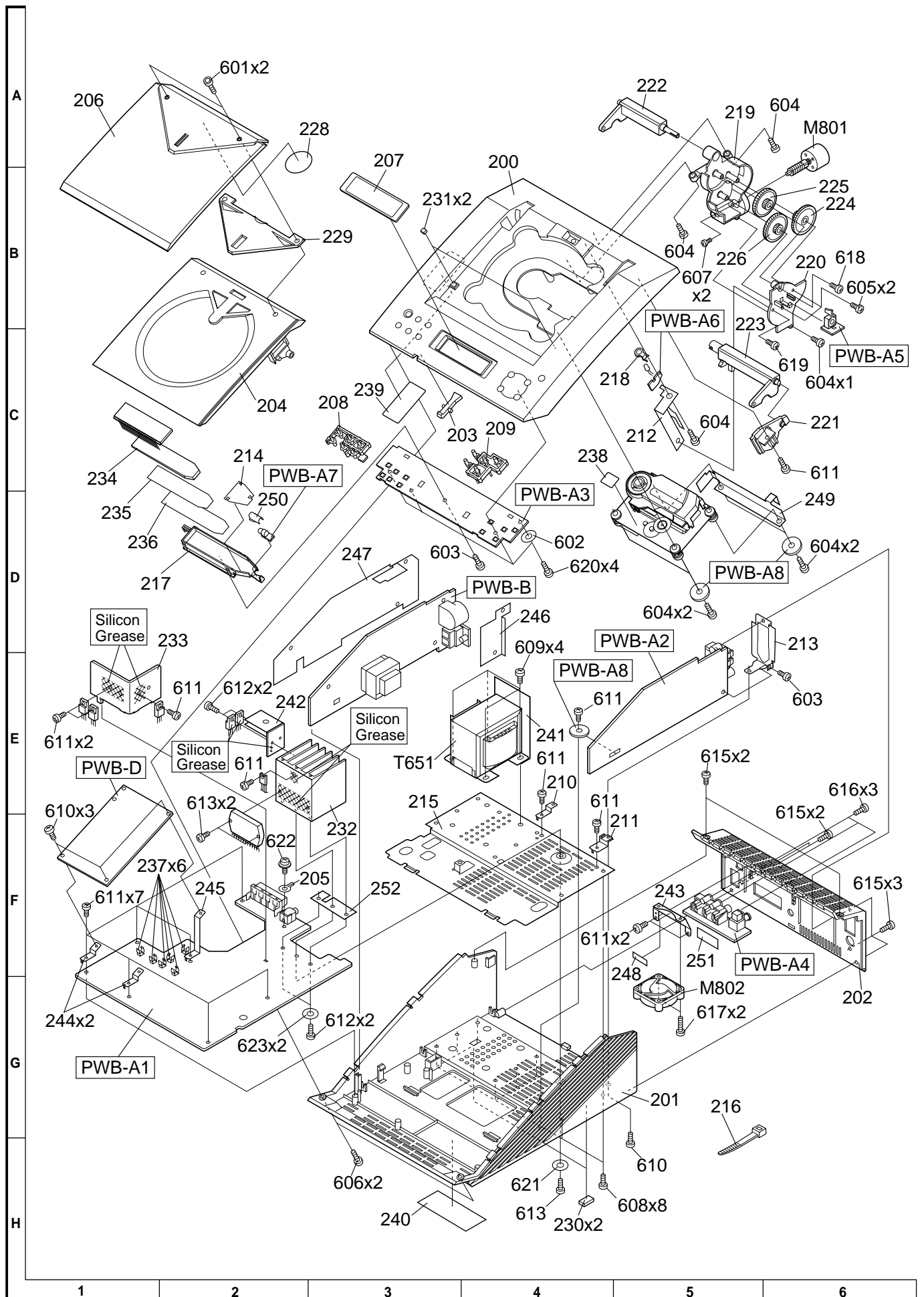


Figure 8 CABINET EXPLODED VIEW

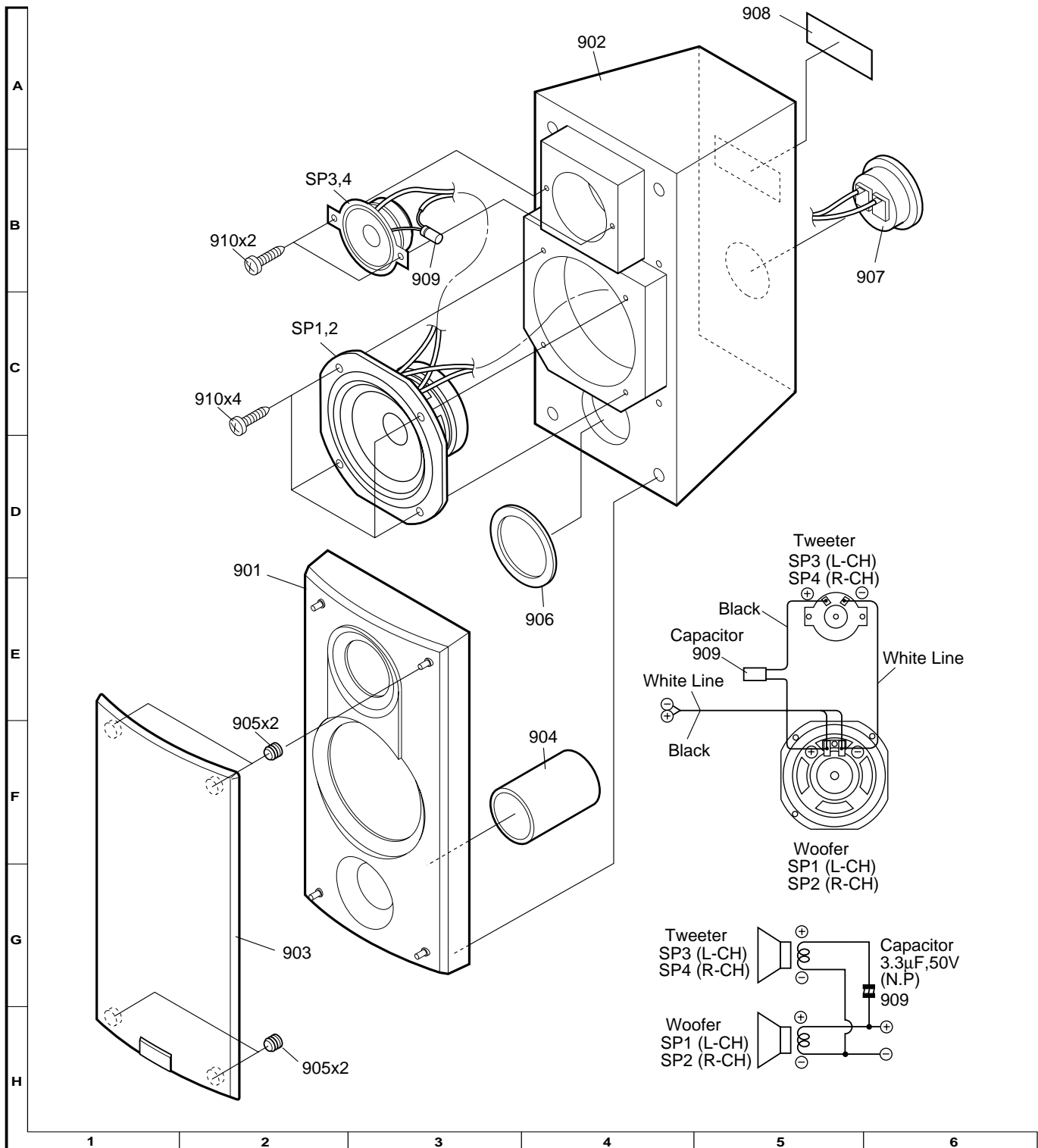


Figure SPEAKER EXPLODED VIEW

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